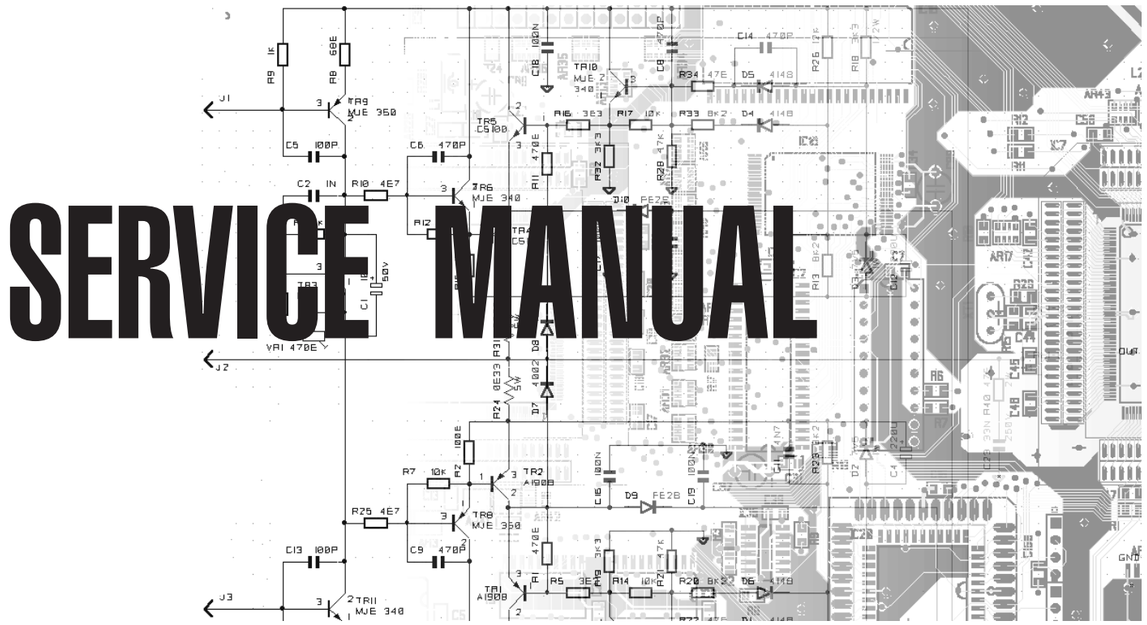
GEM

GPS2600
GPS3600

Pianovelle

Baldwin

SERVICE MANUAL



GENERALMUSIC®

CODE: 270236

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Warnings

Notice

Service must be carried out by qualified personnel only. Any tampering carried out by unqualified personnel during the guarantee period will forfeit the right to guarantee.
For a correct operation of the instrument, after having switched off, be careful to wait at least 3 seconds before switching on again.
To improve the device's specifications, the schematic diagrams may be subject to change without prior notice.
All components marked by this symbol have special safety characteristics, when replacing any of these components use only manufacturer's specified parts.
The (μ) micro symbol of capacitance value is substituted by U.
The (Ω) omega symbol of resistance value is substituted by E.
The electrolytic capacitors are 25Vdc rated voltage unless otherwise specified.
All resistors are 1/8W unless otherwise specified.
All switches shown in the "OFF" position. All DC voltages measured to ground with a voltmeter 20KOhm/V.

- Soldering point.
- Male connector.
- Female connector.
- M/F faston connector.
- Supply voltage.
- Test point.
- Flag joined with one or more flags with the same signal name inscribed.
- Logic supply ground.
- Analog supply ground.
- Chassis ground.
- Earth ground.

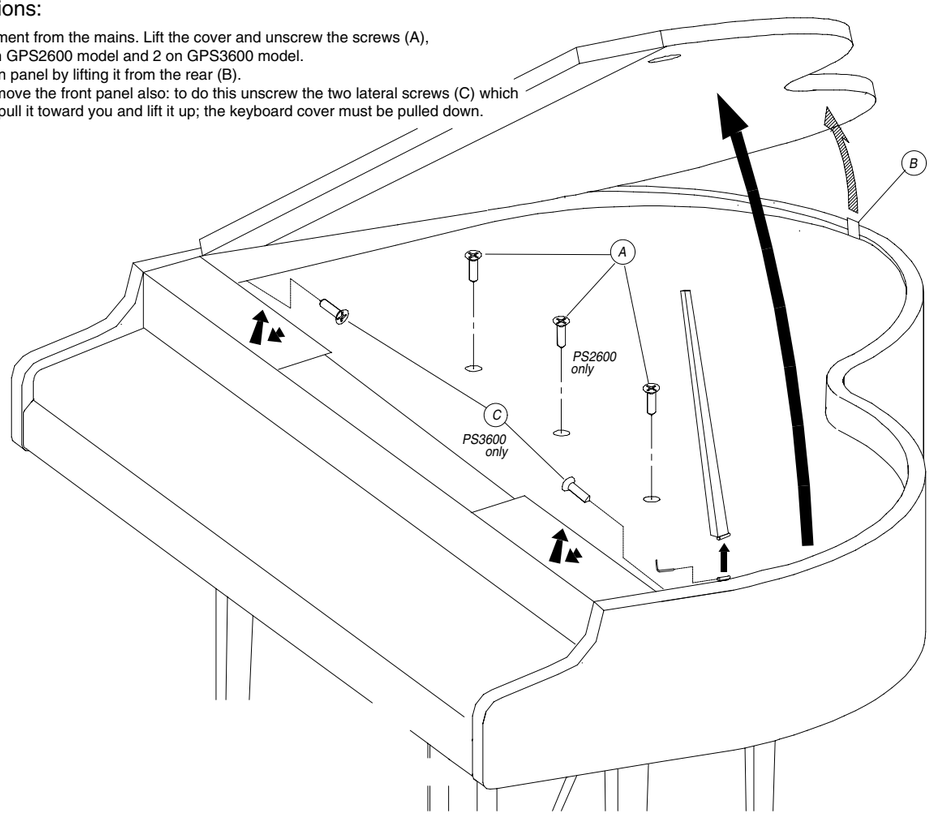
ATTENTION Observe precautions when handling electrostatic sensitive devices.

Address

GENERALMUSIC S.p.A. Sales Division: 47842 S.Giovanni in Marignano (RN) ITALY - Via delle Rose, 12
Phone +39(0)541/959511 - Fax +39(0)541/957404 - GENERALMUSIC on the NET: http://www.generalmusic.com

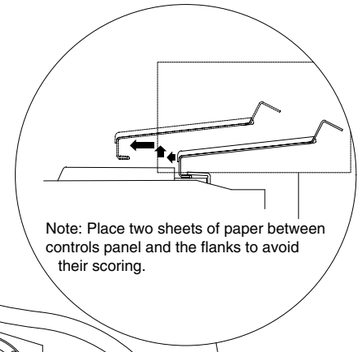
1) Opening Instructions:

Disconnect the instrument from the mains. Lift the cover and unscrew the screws (A), these are 3 screws on GPS2600 model and 2 on GPS3600 model.
Remove the protection panel by lifting it from the rear (B).
On GPS3600 only remove the front panel also: to do this unscrew the two lateral screws (C) which lock it to the chassis, pull it toward you and lift it up; the keyboard cover must be pulled down.

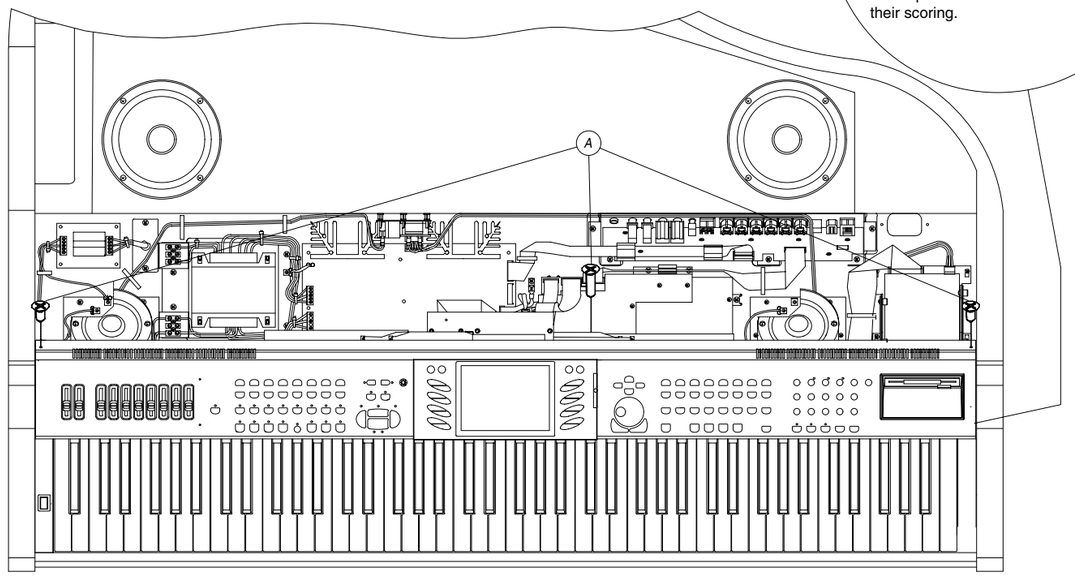


1) Opening Instructions:

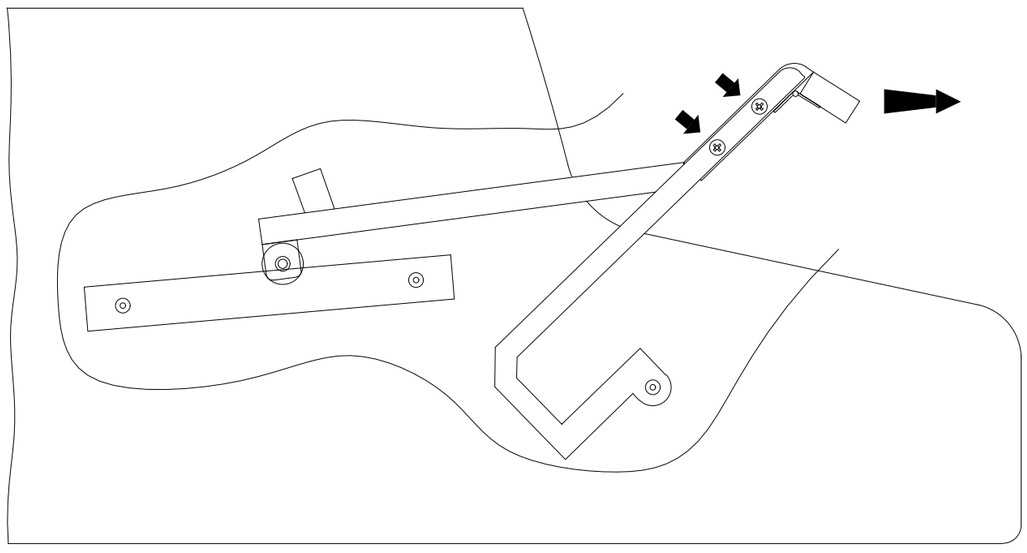
To easy access to the internal circuitry, you must remove the controls panel.
Unscrew the three screws (A), disconnect all the jumpers, pull the controls panel toward you and raise it.



Note: Place two sheets of paper between controls panel and the flanks to avoid their scoring.



3) Only on GPS3600 to remove the keyboard cover unscrew the four screws on the arms (two for each side), then pull out the cover.

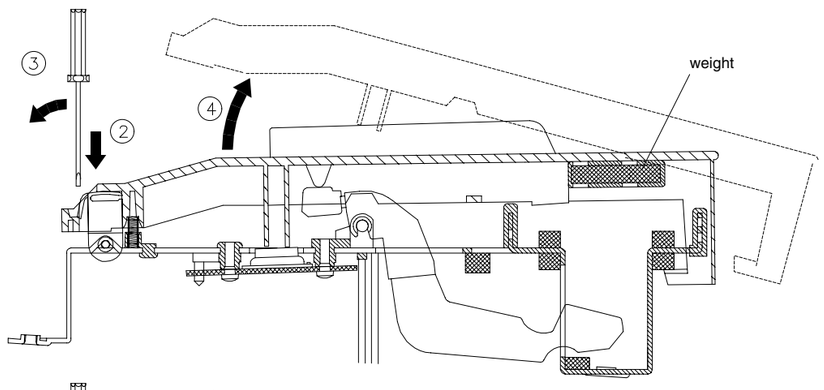


IMPORTANT NOTICE:

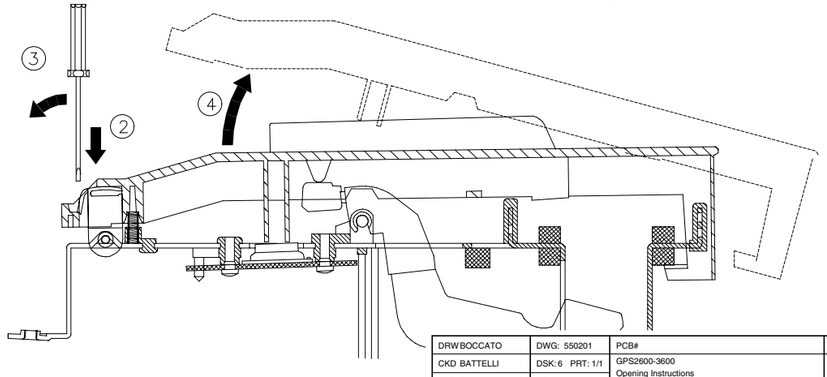
Starts from july 2000 the GPS2600 and GPS3600 models are manufactured with a new type of keyboard (TP23), it may be recognizable from first versions (TP21) by means the weight applied at the key front end in the first type (TP21) only.
Also the first type of piano are recognizable from the second by the code imprinted on the product label:
991207, 991208, 991223, 991224, 991225, 991226, 991227, 991228, 991229, 991230, 991231, 991232 identify the first versions (TP21 keyboard), while:
991279, 991280, 991281, 991282, 991283, 991284, 991285, 991286, 991287, 991289, 991290 identify the second versions (TP23 keyboard).

4) To remove a key insert a screwdriver or similar tool in the split at the key back, apply a light pressure and push in the direction shown. Before removing a natural key you must remove the keyboard, removing a sharp key this operation is not necessary.

TP21

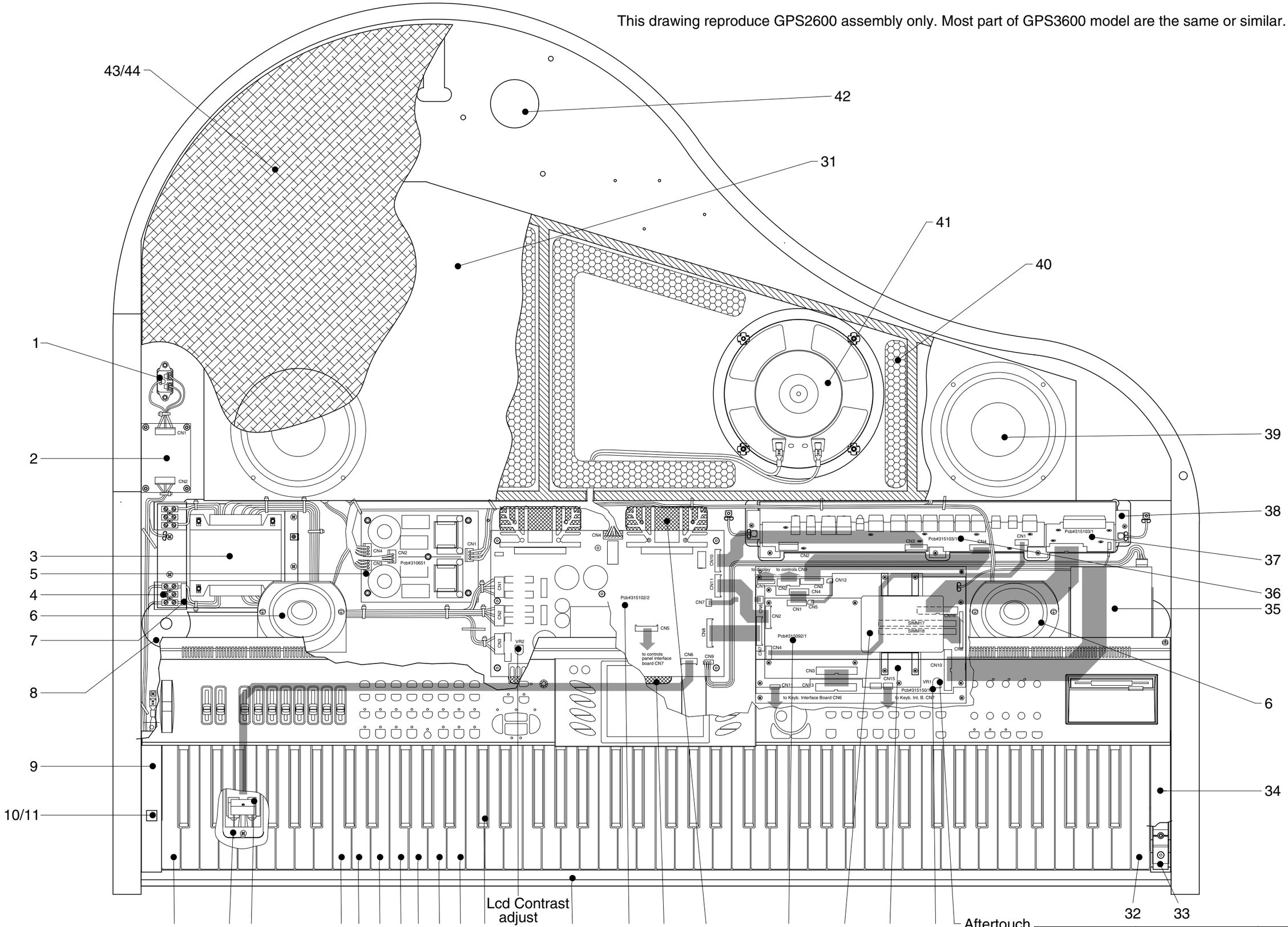


TP23



DRW BOCCATO	DWG: 550201	PCB#	GENERALMUSIC S.p.A. ITALY
CKD BATTELLI	DSK: 6 PRT: 1/1	GPS2600-3600 Opening Instructions & Keyboard disassembling	ALL RIGHTS ARE RESERVED, NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC.
APP. PANNELLI	REV: 10/07/00		

This drawing reproduce GPS2600 assembly only. Most part of GPS3600 model are the same or similar.



DRW G.Boccato	DWG# 550199	PCB#	GENERALMUSIC S.p.A. ITALY
CKD I.Battelli	DISK: 6 PRT: 1/2	PS2600 Internal Assembly for descriptions and codes see REF column on Spare Part List further on this manual.	ALL RIGHTS ARE RESERVED. NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC.
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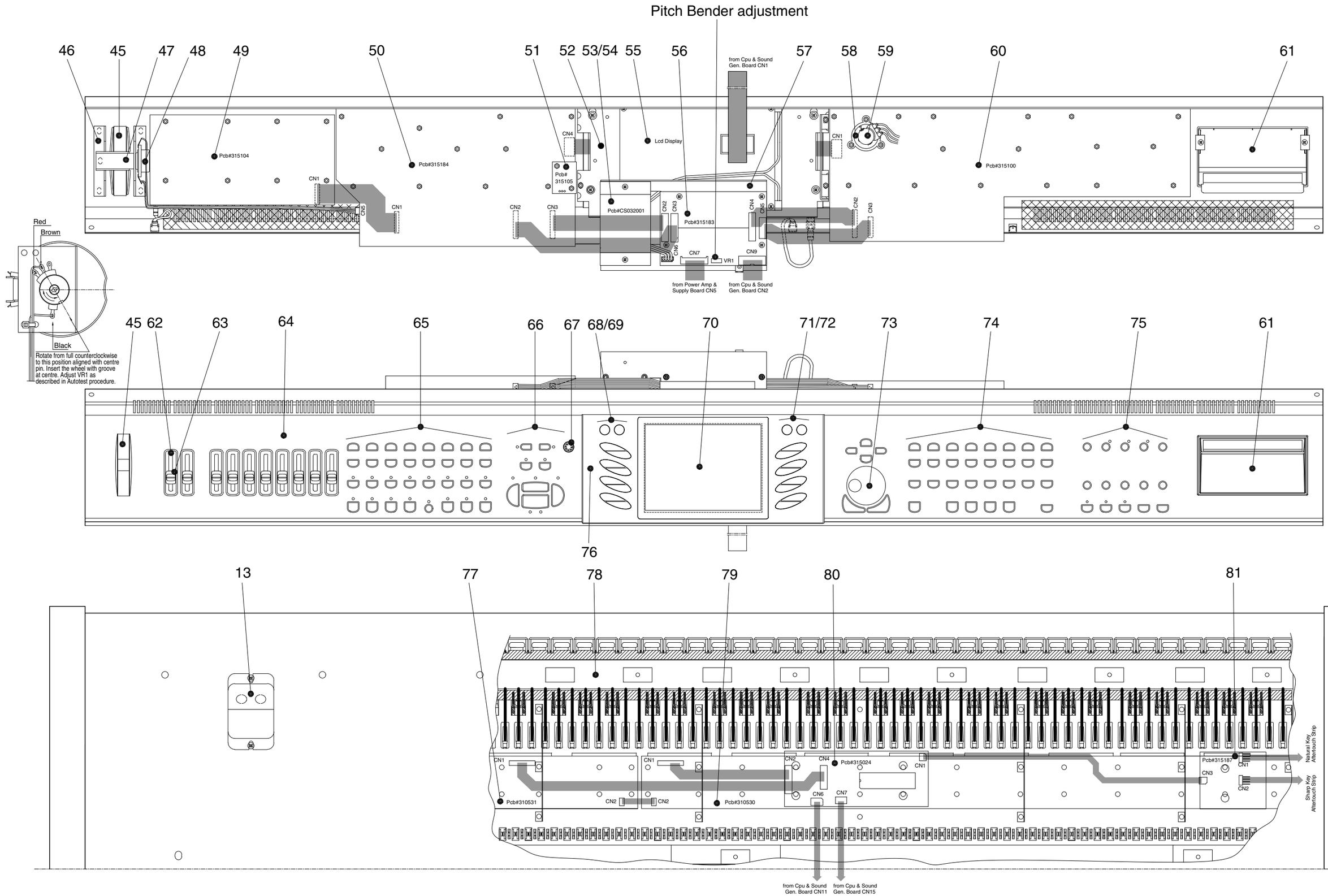

This drawing reproduce GPS2600 assembly only. Most part of GPS3600 model are the same or similar.

DRW G. Boccato	DWG: 550200	PCB#	GENERALMUSIC S.p.A. ITALY
CKD I.Battelli	DSK: 6 PRT: 1/1	GPS2600 Controls Panel & Keyboard Assembly for descriptions see REF column on Spare Part List further on this manual.	ALL RIGHTS ARE RESERVED, NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC.
APP. R.MORBIDI	REV: 07/07/00		

MAINS

768198
MAINS FILTER BOARD
CN1
CN2

POWER SWITCH ON/OFF

730506 TRANSFORMER 230V
730654 TRANSFORMER 115V

110400
3,5" DISK DRIVE
CN
CN

HARD DISK
CN

730523
PHONES BOARD
CN1
PHONES 1
S1
PHONES 2
S2

761200 – POWER AMPLIFIER & SUPPLY BOARD
CN9
POWER AMPLIFIER 2+2W
IC4
MUTING
TR11, TR12
R PWR OUT
L PWR OUT
CN5
IC11
L & R SPEAKER EQ NET
IC5
POWER AMPLIFIER 70+70W
IC2, 10
MUTING
RL1
R SPK
L SPK
CN4
IC13
IC12
OUT–1
OUT–2
OUT–R
OUT–L
CN7
IC14
CONV.R
CONV.L
CN11
IN 1
IN 2
OUT R
OUT–L
CN10
MUTING
RL2
CN8
CN3
RECTIFIER
D8
+5V LOGIC SUPPLY
IC3, TR9
CN1
RECTIFIER
D6
+38V –38V SUPPLIES
CN2
RECTIFIER
D7
+18V –18V SUPPLIES
+12V –12V SUPPLIES
IC6, 9
VOK & MUTING CIRCUIT
TR1, 2, 3
4V8 NiCd BATTERY
B1
PEAK DETECTOR
IC8
PEAK 1
PEAK–2
CN6

731029
CROSSOVER BOARD
CN1
CN1

WOOFER
MID–WOOFER TWEETER
MID–WOOFER TWEETER
WOOFER
LEFT SPEAKERS
RIGHT SPEAKERS

730651
CONTROLS & MIDI I/O BOARD
CN4
CN3
PEDAL BOARD
S4
COMPUTER
RS232, RS422
MIDI OUT A
S9
MIDI THRU B
S10
MIDI IN B
S8
MIDI OUT A
S6
MIDI THRU A
S7
MIDI IN A
S5
INPUT 1
INPUT 2
S14, 15
L & R OUT
S2, 3
VIDEO S–VHS
S12
VIDEO RGB
S13
CN1

730505
SLIDERS BOARD
CN1

810681 – LEFT CONTROLS PANEL BOARD
CN1
CN4
CN2
CN3

140527
L MYLAR STRIP

080755
LCD DISPLAY
CN
CN

140528
R MYLAR STRIP

810299 – RIGHT CONTROLS PANEL BOARD
CN1
CN3
CN2

730508
CONTRAST BOARD

730246
DC/AC CONV.

761196 – CONTROLS PANEL INTERFACE BOARD
CN3
CN6
CN5
CN2
CN4
CN9
CN7

810552 – 39N LEFT CONTACTS BOARD
CN2
CN1

810551 – 49N RIGHT CONTACTS BOARD
CN2
CN1

970330 – SCSI INTERFACE (optional accessory)
CN1

761142 – KEYBOARD INTERFACE BOARD
CN2
CN7
CN4
CN6
CN9

731033
AFTERTOUCH CONNECTION BOARD

761195 – CPU & SOUND GENERATOR BOARD

4.19 MHz QUARTZ OSCIL.
XT2
32768 Hz QUARTZ
XT3
CLOCK CALEN–DAR
IC25
BATTERY TEST
IC39
MC68360 – MAIN CPU
IC23
D16–D31
A1–A21
32Mbit FLASH MEMORY
IC22, 23
104037 32Mbit ROM
IC35
16Mbit DYNAMIC RAM
IC24
16Mbit RAM MODULE
CN9
HARD DISK BUFFER DRAM
CN3
RXD1,2,4
TXD1,2,4
CN15
RXD3
TXD3
CN1
CN2
RXD3
TXD3
CN8
D16–D31
A1–A3
CN11
KB
CN16
D16–D31
A1–4, A19–21
CN10
761143 – A/V WITH VOCAL PROCESSOR BOARD (PAL)
761152 – A/V WITH VOCAL PROCESSOR BOARD (NTSC)
QUARTZ
XT3
105005 FPGA (VIDEO MODE)
IC9
256Kbit VIDEO DRAM
IC16
RAM DAC
IC21
CHROMA SUBCAR–RIER PLL
IC15, XT2, TR8
PAL/ NTSC ENCODER
IC19
ADSP2181 DIGITAL SIGNAL PROCESSOR
IC17
SIGMA DELTA ADC
IC6
CN13
CN3
CN1
CN5
CN4
CN12
CN2
D24–D31
A0–A21
A1/A19–A21
MAIN RESET
IC30
105005 – FPGA (LCD MODE)
IC28
256Kbit LCD SRAM
IC31
20MHz CERAMIC RESON.
XT5
DMAAD0–3
A5–A13
D16–D31
45.1 MHz QUARTZ
XT1
DD0–DD15
104035 64Mbit ROM
IC8
104036 64Mbit ROM
IC9
104041 64Mbit ROM
IC10
DRAM SIMM MODULE
SIMM17, 18
64Mbit SAMPLES DRAM
CN5
ADR0–ADR20
IC7
EDD–ED17
EAD0–EAD8
256Kx18 DYNAMIC RAM
IC6
DISP3 DIGITAL SOUND PROCESSOR
FLOPPY DISK CONTROLLER
IC37
D24–D31
32 MHz QUARTZ
XT4
DAC
IC2, 3
x2
OUT–1
OUT–2
OUT–R
OUT–L
CN5
CN7

DRW Boccato	DWG# 550195	PCB#	GENERALMUSIC S.p.A. ITALY
CKD Battelli	DISK: 6 PRT: 1/1	PS2600-GPS2600-GPS3600 BLOCK & WIRING DIAGRAM	ALL RIGHTS ARE RESERVED. NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC.
APP. Pannelli	REV: 20/02/2000		

761200 POWER AMPLIFIER & SUPPLY BOARD

730651 - CONTROLS & MIDI I/O BOARD

768198 - MAINS FILTER BOARD

730506 TRANSFORMER ASSY (EUROPE VER.)

730654 TRANSFORMER ASSY (U.S. VERSION)

731029 CROSSOVER BOARD

730523 PHONES BOARD

720613 - TRIPLE PEDALS ASSEMBLY

MAINS (EUROPE VER.) 230VAC +/-15% 50Hz

MAINS (U.S. VERSION) 115VAC +/-15% 50/60Hz

** NOTE: ON GPS3600 THE POWER SWITCH IS CONNECTED BEFORE THE MAINS FILTER

NOTE: THE DAMPER POTENTIOMETER HAVE SPECIAL SPECIFICATIONS, REPLACE WITH MANUFACTURER'S PART ONLY (CODE:070556). DAMPER ADJUSTMENT: SET THE POTENTIOMETER TO HAVE ABOUT 700 OHM BETWEEN PINS AND 1 OF DIN PLUG WITH THE PEDAL AT THE REST POSITION.

DRW BOCCATO	DWG# 550189	PCB# 310643 - 315102 - 315103 - 310651 -310513	GENERALMUSIC S.p.A. ITALY
CKD BATTELLI	DSK# 6 PART:1/1	SCHEMATIC DIAGRAM PS2600-GPS2600-GPS3600 POWER AMPLIFIER & SUPPLY BOARD - CONTROLS & MIDI I/O BOARD - CROSSOVER - PHONES BOARD	ALL RIGHTS ARE RESERVED, NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC
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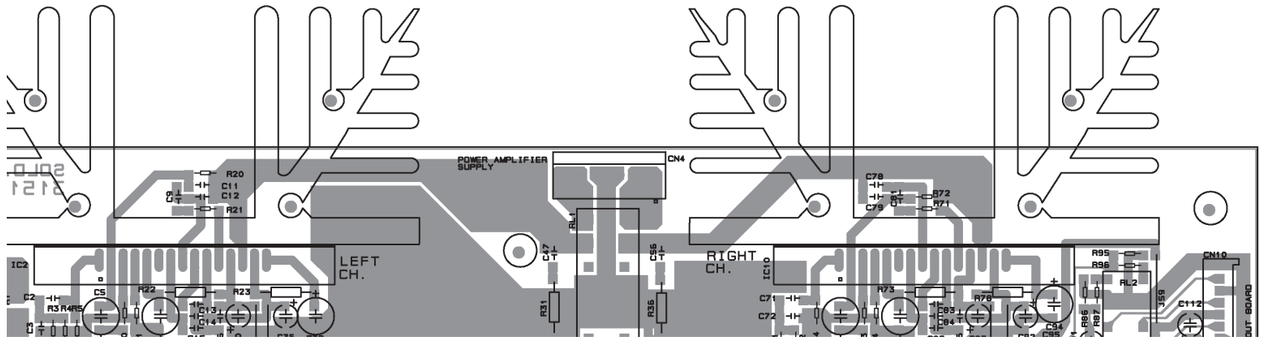
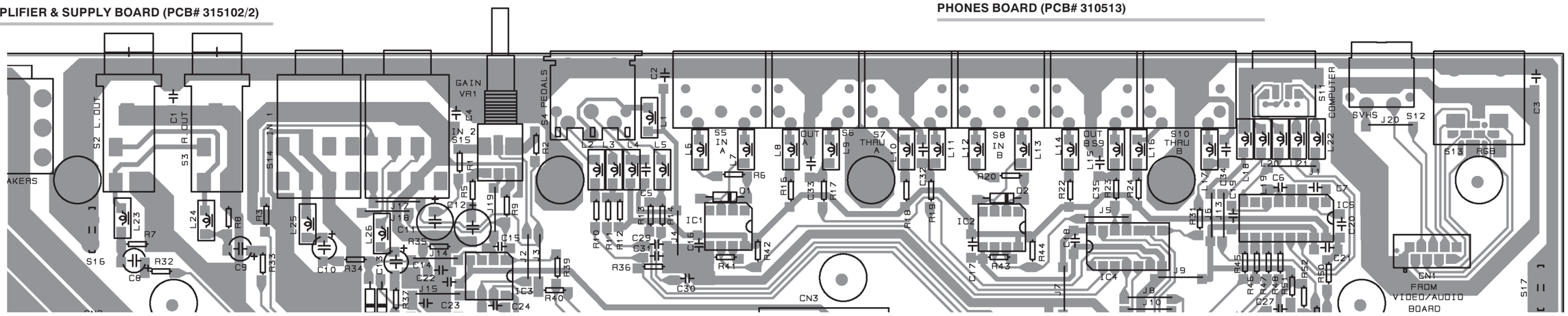


CROSSOVER BOARD (PCB# 310651)

POWER AMPLIFIER & SUPPLY BOARD (PCB# 315102/2)



PHONES BOARD (PCB# 310513)

CONTROLS & MIDI I/O BOARD (PCB# 315103/1)

DRW: BOCCATO	DWG: 315102,315103 310651,310513	SCHEMATIC DIAGRAM PS2600 GPS2600-3600	GENERALMUSIC S.p.A. Italy
CKD: BATTELLI	DISK: 6 PART: 1/1	Power Amplifier & Supply, Crossover, Controls & MIDI I/O and Phones Boards	ALL RIGHTS ARE RESERVED. NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC.
APP: PANNELLI	REV: 08-03-00		

810299 - RIGHT CONTROLS PANEL BOARD

SOUND GROUPS: PIANO, MALLET, ORGAN, GUITAR, BASS, STRINGS, ENSEMBLE, BRASS, REED, FLUTE, SYN LEAD, SYN PAD, SYN SFX, ETHNIC, PERCUSSIVE, SFX

PROGRAMMABLE PRESETS: 1 2 3 4 5 6 7 8

ENTER, ESCAPE, GRAND PIANO, ELECTRIC GRAND, E. PIANO I, E. PIANO II, VIBES, STORE PRESET

AR1 10K X8 +5V — RIGHT PANEL ADDR & DATA BUS TO C.P. INTERFACE BOARD CN4

CN2: 19 A7, 18 A8, 17 A9, 15 A10, 13 A11, 11 A12, 9 A13, 7 A14, 5 A15, 3 EN_LED; CLK 4; QS 2

AC1 220P X8 — C1 220P — AC2 220P X8

32 TRACK RE-CORDING STUDIO: RECORD, STOP, PLAY

PLAY ALL SONGS, UNUSED, DEMO, SONG, SCORE, EDIT, DISK, UNUSED, UNUSED, UNUSED, UNUSED, HELP, D HOLD, EFFECTS OFF, MELODY OFF, UNUSED

D HOLD, EFFECTS OFF, MELODY OFF, RECORD, STOP, PLAY

DIAL — R1 560E, R2 560E — IC3 74HC86, IC2 74HC74, IC1 74HC74 — DIAL TO C.P. INTERFACE BOARD CN3

IC4 74HC164 — R7 100E, R8 100E, R9 1K, C13 220P, C12 220P

IC4 74HC164, IC2 74HC74, IC1 74HC74, IC3 74HC86 — C14 100N, C4 100N, C5 100N, C7 100N

CN1 PCB#315100

810681 - LEFT CONTROLS PANEL BOARD

STYLE GROUPS: 8 BEAT, 16 BEAT, ROCK, FUNK, DANCE, POP, USER 1, USER 2, SWING, COUNTRY, WORLD, ETHNIC, LATIN 1, LATIN 2, USER 3, USER 4

STYLE ARRANGER: ARR. ON/OFF, ARR. MODE, MEMORY, LOWER MEMORY, TEMPO LOCK, STYLE LOCK, HARMONY ON/OFF, HARMONY TYPE

AR1 10K X8 +5V — LEFT PANEL ADDR & DATA BUS TO C.P. INTERFACE BOARD CN3

CN3: 17 ENLED; CLK 18; QS 19; SD 20

AC2 220P X8 — AC1 220P X8 — R6 100E, R8 100E — C10 100P, C6 100P, C5 100P, C4 1N

VARIATION: 1, 2, 3, 4

FADE IN/OUT, FILL, TAP TEMPO, ENDING, START /STOP, KEY START, INTRO, TRANSP. -, SINGLE TOUCH PLAY, STYLE PRESET, TRANSP. +

ARR. ON/OFF, VAR. 1, VAR. 2, ARR. MODE, VAR. 3, MEMORY, VAR. 4, LOWER MEMORY, FADE IN/OUT, TEMPO LOCK, FILL ◁, STYLE LOCK, FILL ▷, HARMONY ON/OFF, FILL ▷ TAP TEMPO, HARMONY TYPE, START, INTRO, KEY START, ENDING, SINGLE TOUCH PLAY, STOP, TRANSP. -, TRANSP. +

IC2 74HC164 — R3 1K; IC3 74HC164 — R4 1K; IC4 74HC164 — R7 1K

140528 RIGHT CONTACTS MYLAR STRIP — 140527 LEFT CONTACTS MYLAR STRIP — TRACK SCROLL: UP, DOWN

F1 F2 F3 F4 F5 F6 F7 F8

A B C D E F G H

CN4: D0 D1 D2 D3 D4 A0 A1

SLIDERS & CONTRAST TO C.P. INTERFACE BOARD CN2 — SLIDERS FROM SLIDERS BOARD CN1

CN2: 19 LOW. 1, 17 UPP. 2, 15 UPP. 1, 13 M. VOL, 11 MIC/LINE, 9 DRUMS, 7 BASS, 5 ACC. 1/2/3, 3 ACC. 4/5/6, 1 LOW. 2; PITCH B, VEE, VLCD

730508 CONTRAST BOARD — TP1 TP2 TP3 — VR1 5K8 — R1 18K — PCB#315105

IC3 74HC164, IC4 74HC164, IC2 74HC164 — C9 100N, C11 100N, C1 100N — PCB#315104

CN5 — SEE MECHANICAL DRAW ABOVE IN THIS MANUAL TO ALIGN CORRECTLY THE KNOB. — PITCH BENDER 10KB

761196 - CONTROLS PANEL INTERFACE BOARD

CONTROLS PANEL FROM/TO CPU & S.G. BOARD CN2 — CN9: HOLED 1, KB 3, NEXT 5, TXD3-C 7, RXD3-C 9, GET 11, VLCD 13, VEE 15; FOOTSW1, FOOTSW2, PED VOL, RSTV

IC1 VALIS100740 — TR2 BC173C — AR2 4K7 X8 — AC2 47P X8

PITCH ADJ — VR1 22K — R63 470E — TR4 BC560

SLIDERS & CONTRAST FROM LEFT C.P. BOARD CN2 — CN2: 20 LOW. 1, 18 UPP. 2, 16 UPP. 1, 14 M. VOL, 12 MIC/LINE, 10 DRUMS, 8 BASS, 6 ACC. 1/2/3, 4 ACC. 4/5/6, 2 LOW. 2; PITCH B, VEE, VLCD

IC2 74HC4351 MULTIPLEXER DEMULTIPLEXER — R29 1K, R30 1K, R37 1K, R38 1K, R41 1K, R49 1K, R50 1K, R51 1K

DIAL FROM RIGHT C.P. BOARD CN3 — CN5: 13 HOLED, 11 DIR, 9 FQ

CN7 — CONTROLS PANEL SUPPLY FROM POWER AMP. & SUPPLY BOARD CN6: +5V, LGND, +12V, MIC/LINE VOL

LEFT PANEL ADDR & DATA BUS FROM LEFT C.P. BOARD CN3 — RIGHT PANEL ADDR & DATA BUS FROM RIGHT C.P. BOARD CN2

CN6 — TO DC/AC CONVERTER BOARD P1 AC/DC SUPPLY: +12V, LGND, +5V

PCB#315103

730505 - SLIDERS BOARD

MASTER VOL, MIC/LINE, DRUMS, BASS, ACC.1/2/3, ACC.4/5/6, LOWER 2, LOWER 1, UPPER 2, UPPER 1

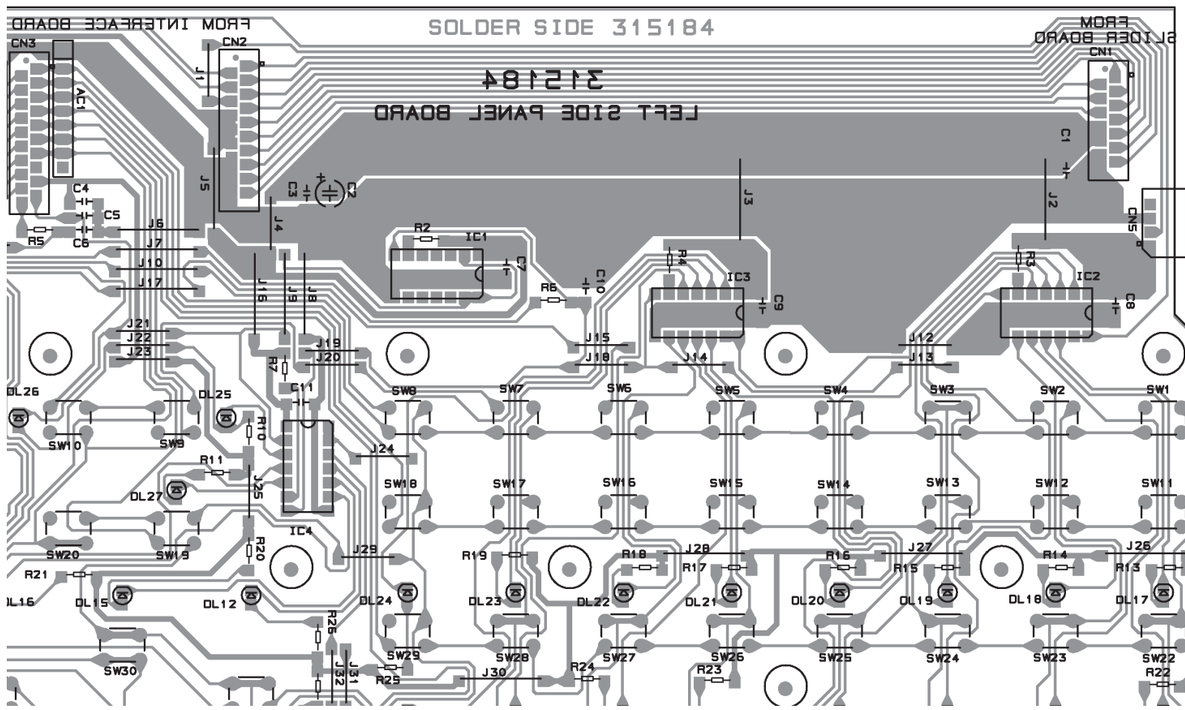
SLIDERS TO LEFT CONTROLS PANEL BOARD CN1

PCB#315104

DRW BOCCATO	DWG# 550190	PCB# 315100 - 315104 - -315183 - 315184	GENERALMUSIC S.p.A.
CKD BATTELLI	DATE 24/02/00	DESCRIPTION PS2600-GPS2600-GPS3600	ALL RIGHTS ARE RESERVED, NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC
APP GALANTI	REV# A	CONTROL PANEL BOARDS	

CONTROLS PANEL INTERFACE BOARD (PCB# 315183)

RIGHT CONTROLS PANEL BOARD (PCB# 315100) reverse layout



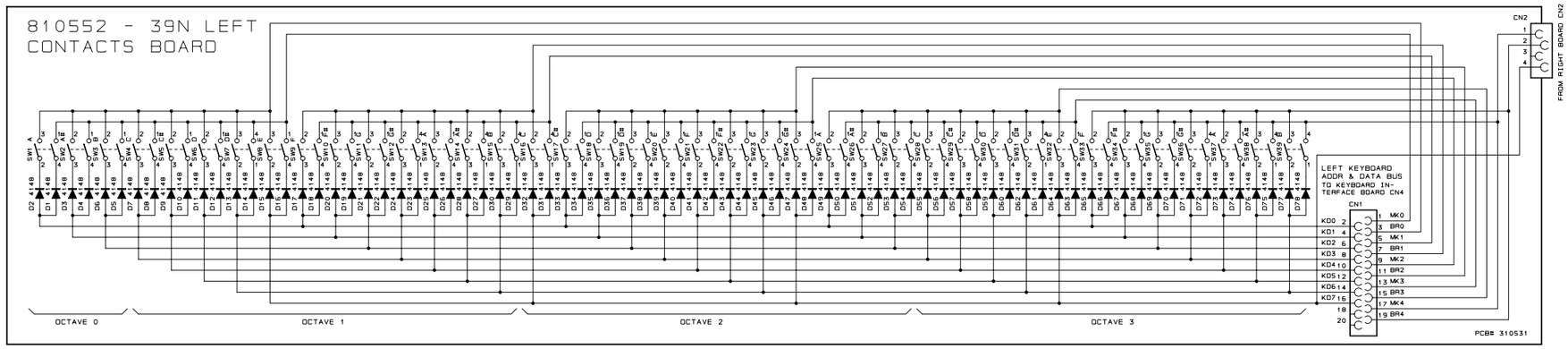
KEYBOARD INTERFACE BOARD (PCB# 315024)

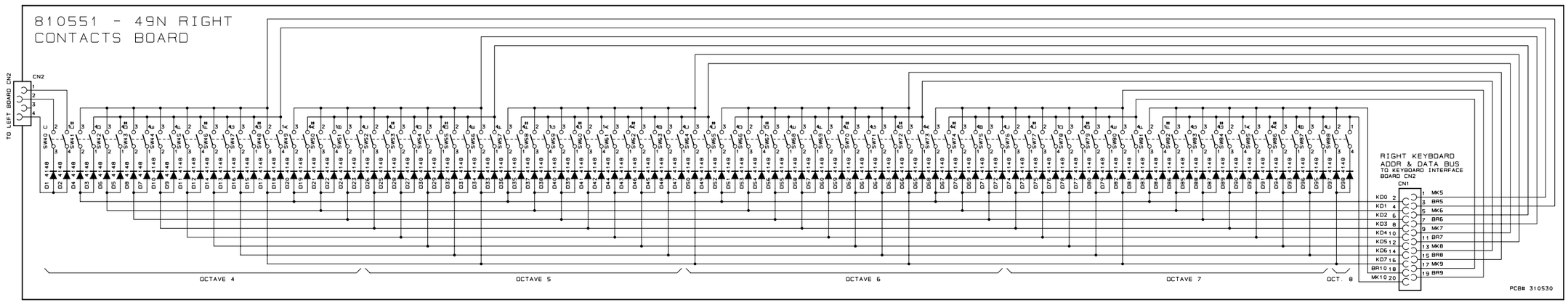
LEFT CONTROLS PANEL BOARD (PCB# 315184) reverse layout

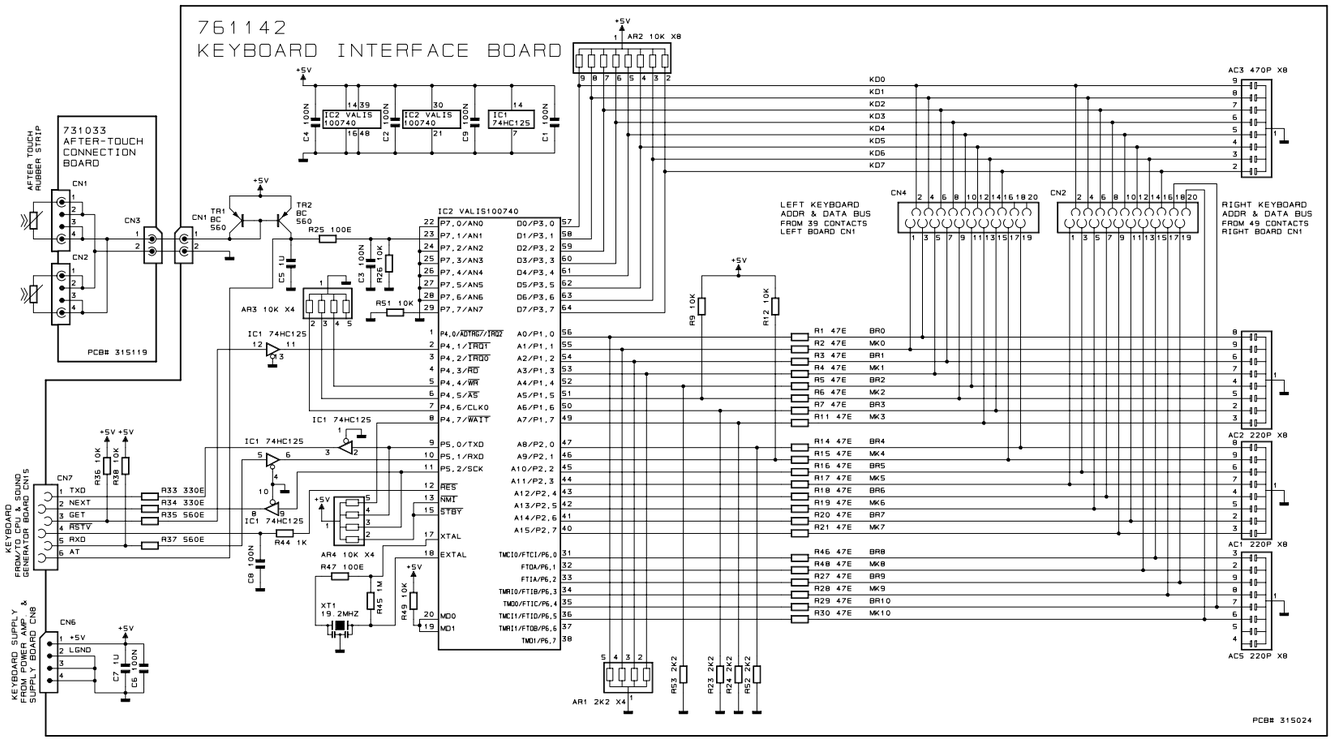
SLIDERS BOARD (PCB# 315104)

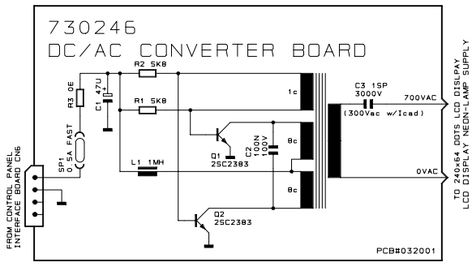
reverse layout

DRW: BOCCATO	DWG: 315100,315104 315183, 315184	SCHEMATIC DIAGRAM PS2600 GPS2600-3600	GENERALMUSIC S.p.A. Italy
CKD: BATTELLI	DISK: 6 PART: 1/1	L & R Controls Panel, Sliders, Interface & Keyboard Interface Boards	ALL RIGHTS ARE RESERVED, NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC.
APP: PANNELLI	REV: 08-03-00		



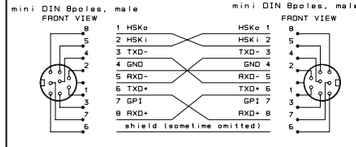




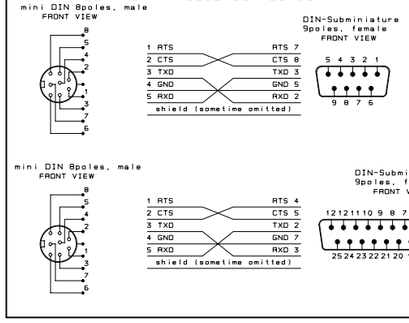


KEYBOARD - COMPUTER CONNECTIONS

APPLE MACINTOSH RS422 CONNECTION

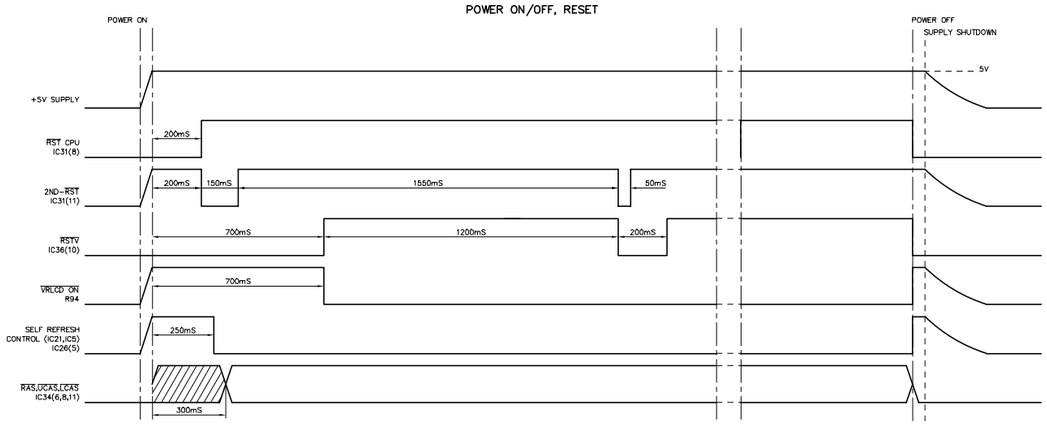


IBM PC/AT RS232 CONNECTION

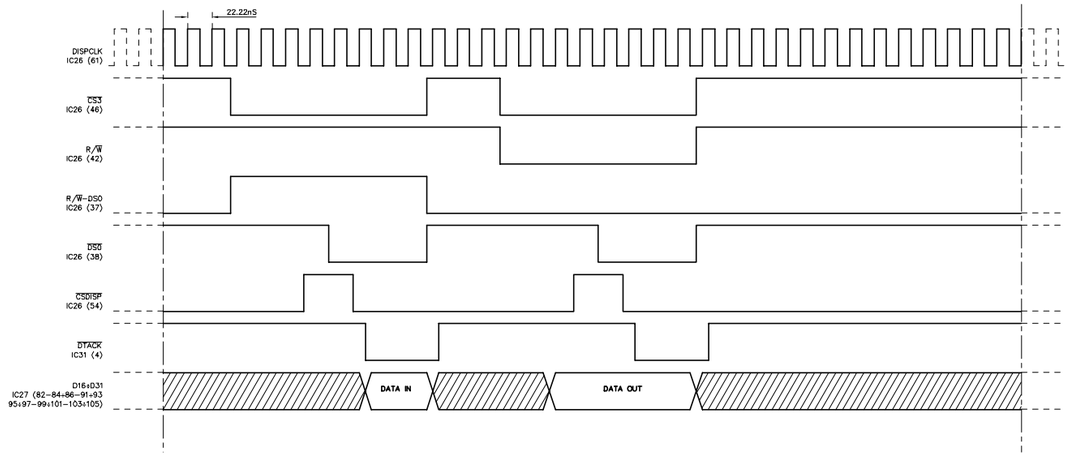


DRW BOCCATO	DWG# 550191	PCB# 310531 310530 315024	MUSIC MEDIA SOFT s.r.l.
DEPT BIORDBELLI	DATE 5 1/1	DESCRIPTION CONTACTS BOARD & KEYBOARD INTEFACE BOARD	ALL RIGHTS ARE RESERVED, NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY MMS s.r.l.
PART# [illegible]	REV# 22/02/99		

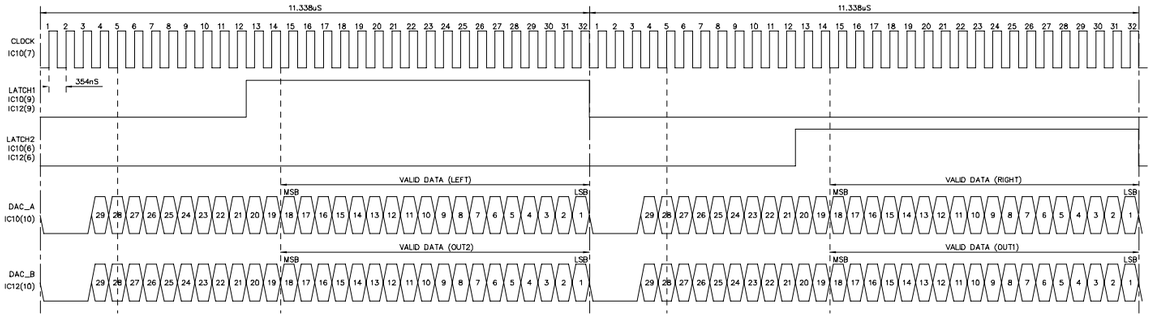
POWER ON/OFF, RESET



DISP 3 TIMING

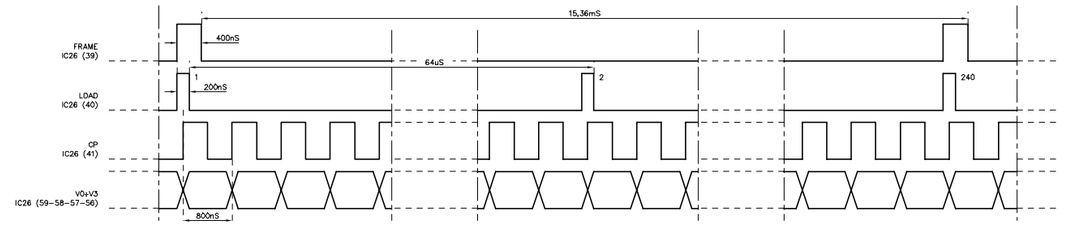


PCM SERIAL DATA BUS

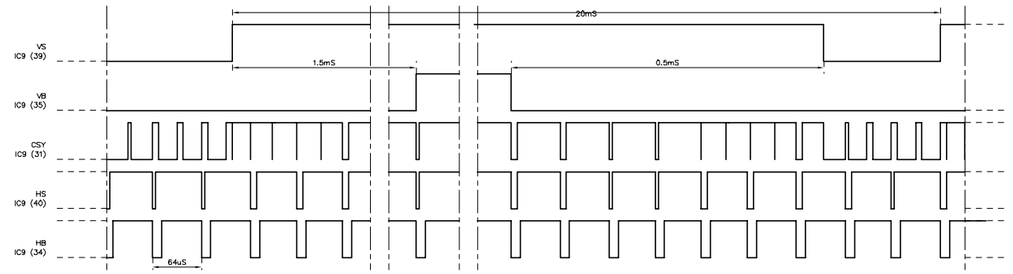


NOTE: ALL COMPONETS PIN REFERENCE ARE LOCATED ON "CPU & SOUND GENERATOR BOARD" UNLESS OTHERWISE SPECIFIED.

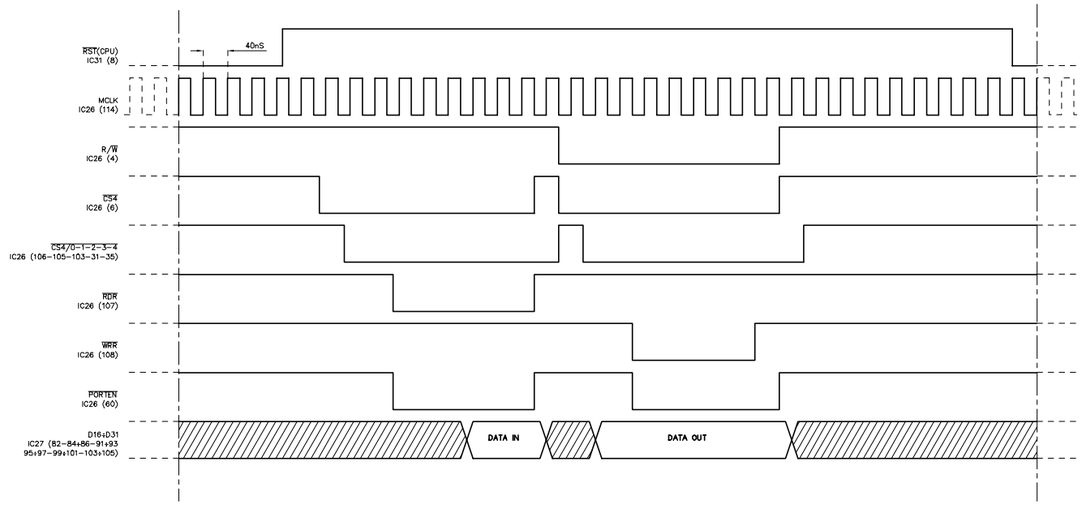
LCD TIMING



VIDEO TIMING



FLOPPY DISK DRIVE AND HARD DISK TIMINGS



ADJUSTMENTS TABLE

N.	ADJUSTMENT TYPE	TEST POINT	KEY PRESSED	OPERATION POINT	READING VALUE	NOTE:
1	LCD CONTRAST ADJ.	SEE NOTE	NONE	VR2 POWER AMPLIFIER & SUPPLY BOARD	SEE NOTE	PUT THE CONTRAST POTENTIOMETER ON THE CONTROLS PANEL AT HALF STROKE. TURN THE TRIMMER TO OBTAIN THE BEST CONTRAST. VERIFY THE ADJUSTMENT MOVING THE POTENTIOMETER.
2	AFTERTOUCH ADJ	VR1 SIDE CN15	ONE KEY NOTE	VR1	~2Vcc	APPLY A 1350 grams WEIGHT ON THE KEY FRONT END, TO OBTAIN A VALID MEASERE PRESS THE KEY NOTE TWO OR THREE TIMES WITH MORE PRESSURE, TURN THE TRIMMER TO HAVE THE VALUE SPECIFIED.
3	PITCH CENTRE ADJ	DISPLAY	WHEEL AT CENTRE	VR1 CONTROLS PANEL INTERFACE BOARD	64	PRESS "EDIT", SELECT "1-GENERAL", PRESS "F1-SYSTEM INFO", "F8", THE DISPLAY SHOW A WARNING MESSAGE: PRESS "ENTER", "A-PANEL TEST", MOVE THE PITCH BENDER, ADJUST VR1 TO READ "64" WITH PITCH AT CENTRE.

DRW BOCCATO	DWG# 550189	SCHEMATIC DIAGRAM PS-GPS2600-3600	GENERALMUSIC S.p.A. ITALY	
CKD RICCOBELLI	DISK: 6 PART:		ALL RIGHTS ARE RESERVED, NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC.	
APP. PANNELLI	REV. 09-03-00	TIMING TABLE & ADJ. TABLE		

761094
16Mbit (2Mbyte) DRAM MODULE BOARD
(HARD-DISK I/O CACHE/BUFFER)

PCB# 315094

761195
CPU & SOUND GENERATOR BOARD
Part 1 of 2

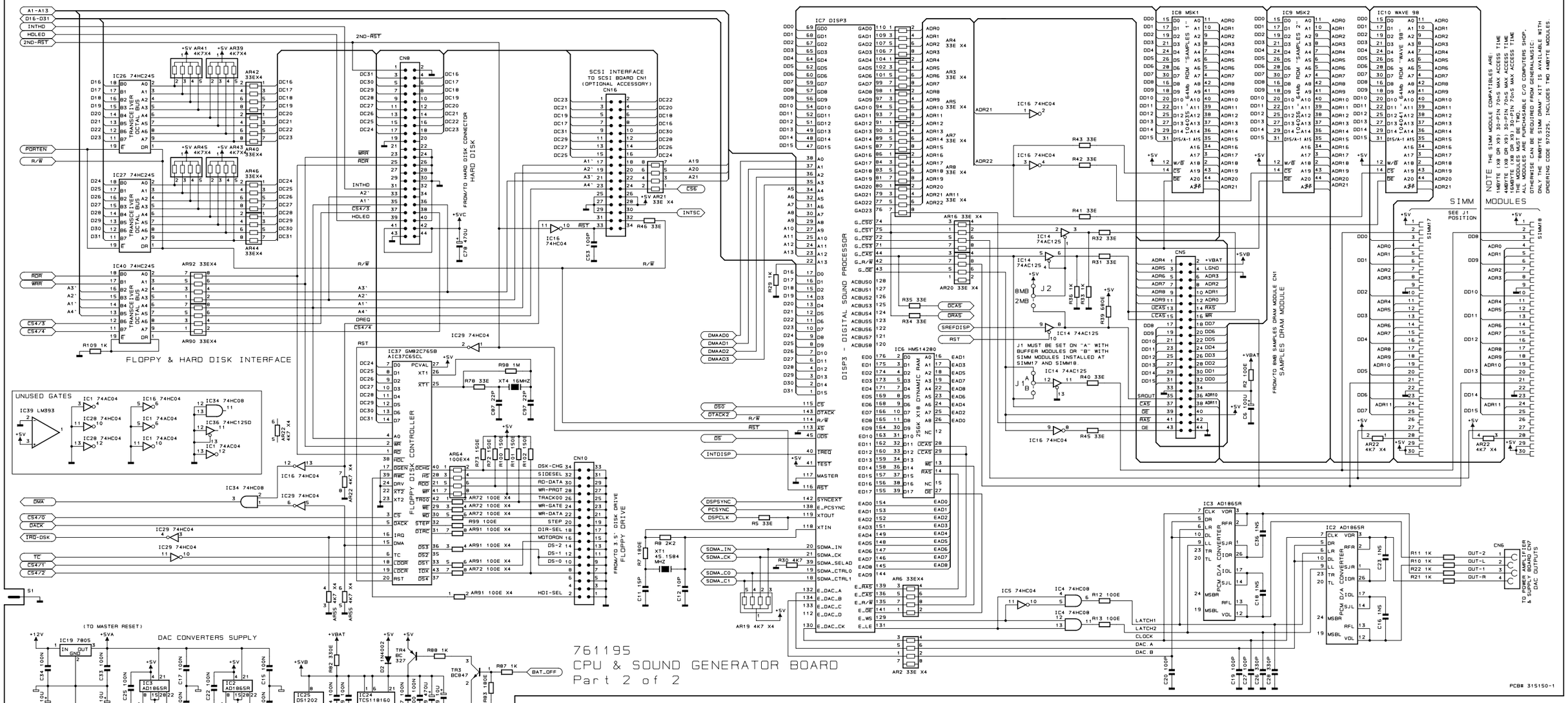
080755
Lcd Display
320x240dots
SP14Q001 Hitachi

NOTE: VEE MUST BE WITHIN -12 TO -24Vdc (-15Vdc TYP.). VLCD HAVE A TYPICAL VALUE OF 2V OVER VEE ADJUSTABLE BY VR11 ON CONTROLS PANEL.

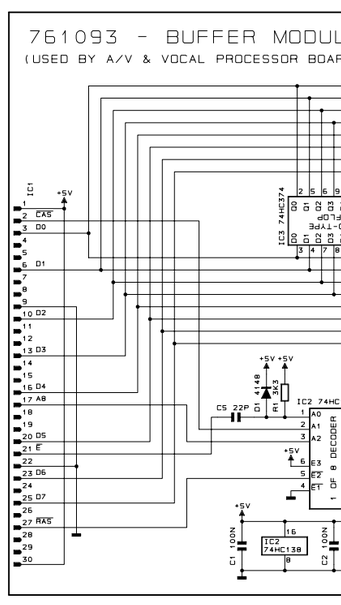
NOTE: Both the connectors and relative boards (Controls & Keyboard) must be connected and operative otherwise the instrument stops it at the initial screen.

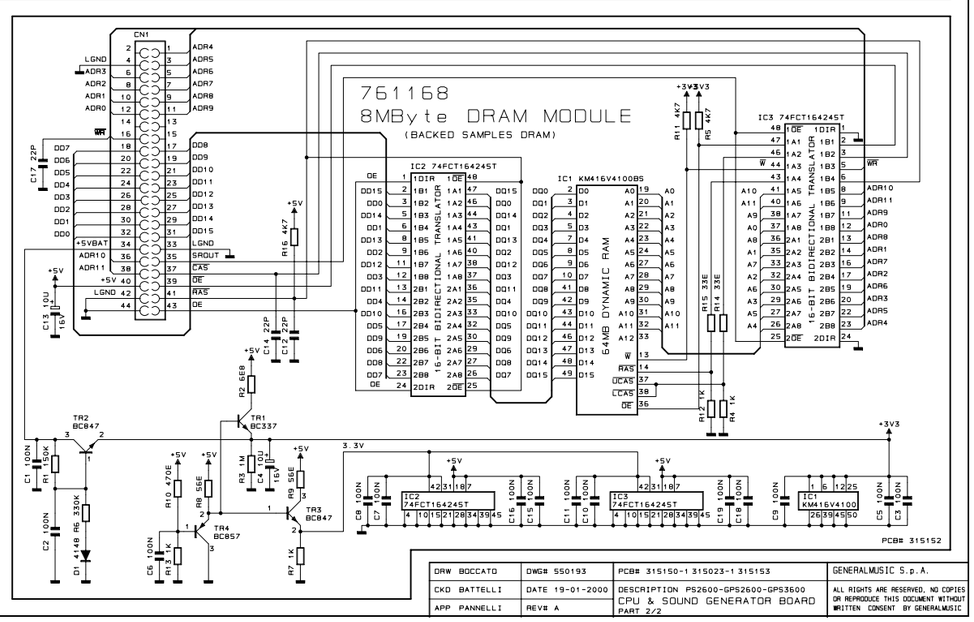
AFTER TOUCH ADJUSTMENT

DRW BOCCATO	DWG# 550192	PCB# 315150-1 315094	GENERALMUSIC S.p.A.
CKD BATTELLI	DATE 19-01-2000	DESCRIPTION PS2600 GPS2600 GPS3600 CPU & SOUND GENERATOR BOARD PART 1/2	ALL RIGHTS ARE RESERVED. NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC
APP PANNELLI	REV# A		

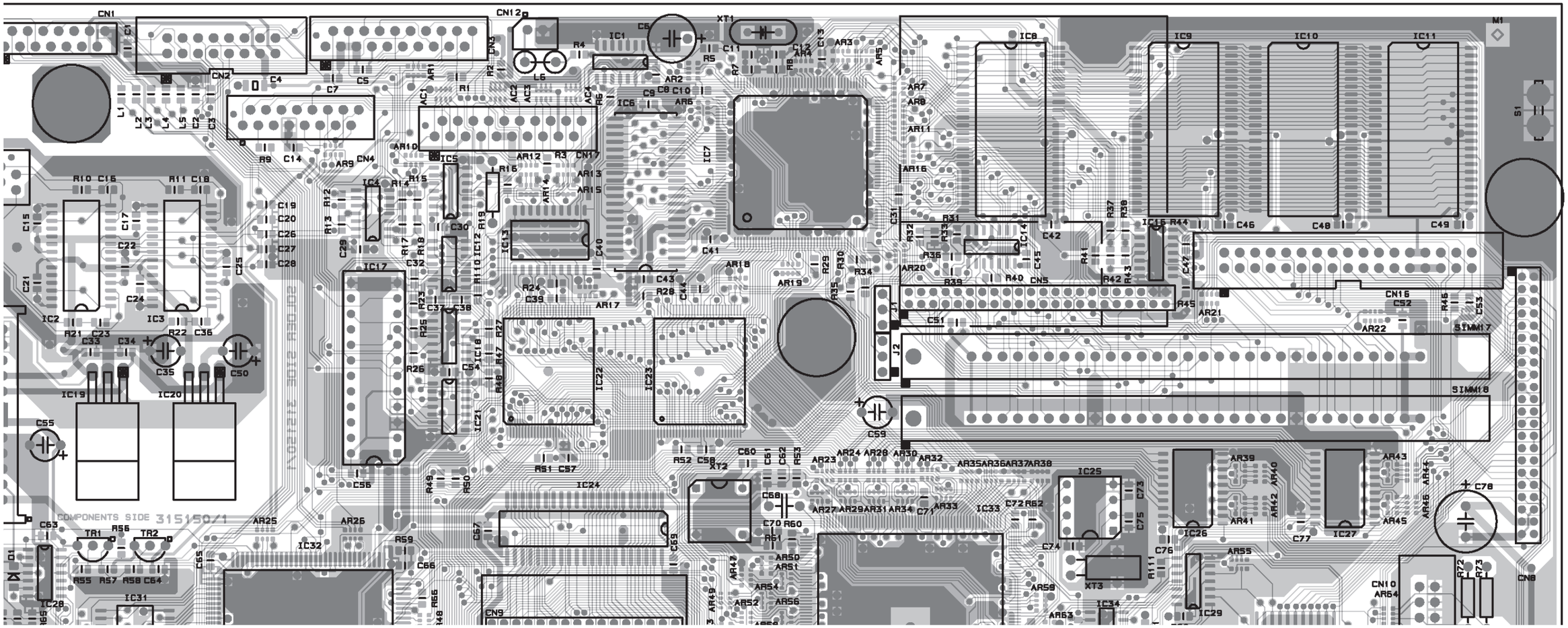


NOTE: THE SIMM MODULE COMPATIBLES ARE:
1MBYTE (X8 OR X9) 30-PIN 70nS MAX ACCESS TIME
4MBYTE (X8 OR X9) 30-PIN 70nS MAX ACCESS TIME
16MBYTE (X8 OR X9) 30-PIN 70nS MAX ACCESS TIME
THE MODULES MUST BE TWO.
THE MODULES ARE PURCHASABLE C/O COMPUTERS SHOP.
OTHERWISE CAN BE PURCHASED FROM GENERALMUSIC.
ONLY THE "8MBYTE SIMM DRAM" KIT IS AVAILABLE WITH ORDERING CODE 970225, INCLUDES TWO 4MBYTE MODULES





DRW BOCCATO	DWG# 550193	PCB# 315150-1 315023-1 315153	GENERALMUSIC S.p.A.
CKD BATTELLI	DATE 19-01-2000	DESCRIPTION PS2600-GPS2600-GPS3600 CPU & SOUND GENERATOR BOARD PART 2/2	ALL RIGHTS ARE RESERVED. NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC
APP PANNELLI	REV# A		



CPU & SOUND GENERATOR BOARD (PCB# 315150/1)

DRW: BOCCATO	DWG: 315150/1	SCHEMATIC DIAGRAM PS2600 GPS2600-3600	GENERALMUSIC S.p.A. Italy
CKD: BATTELLI	DISK: 6 PART: 1/1	Cpu & Sound Generator Board	ALL RIGHTS ARE RESERVED, NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC
APP: PANNELLI	REV: 08-03-00		

CN2 - to Controls Panel Board

CN3 - to MIDI I/O Board

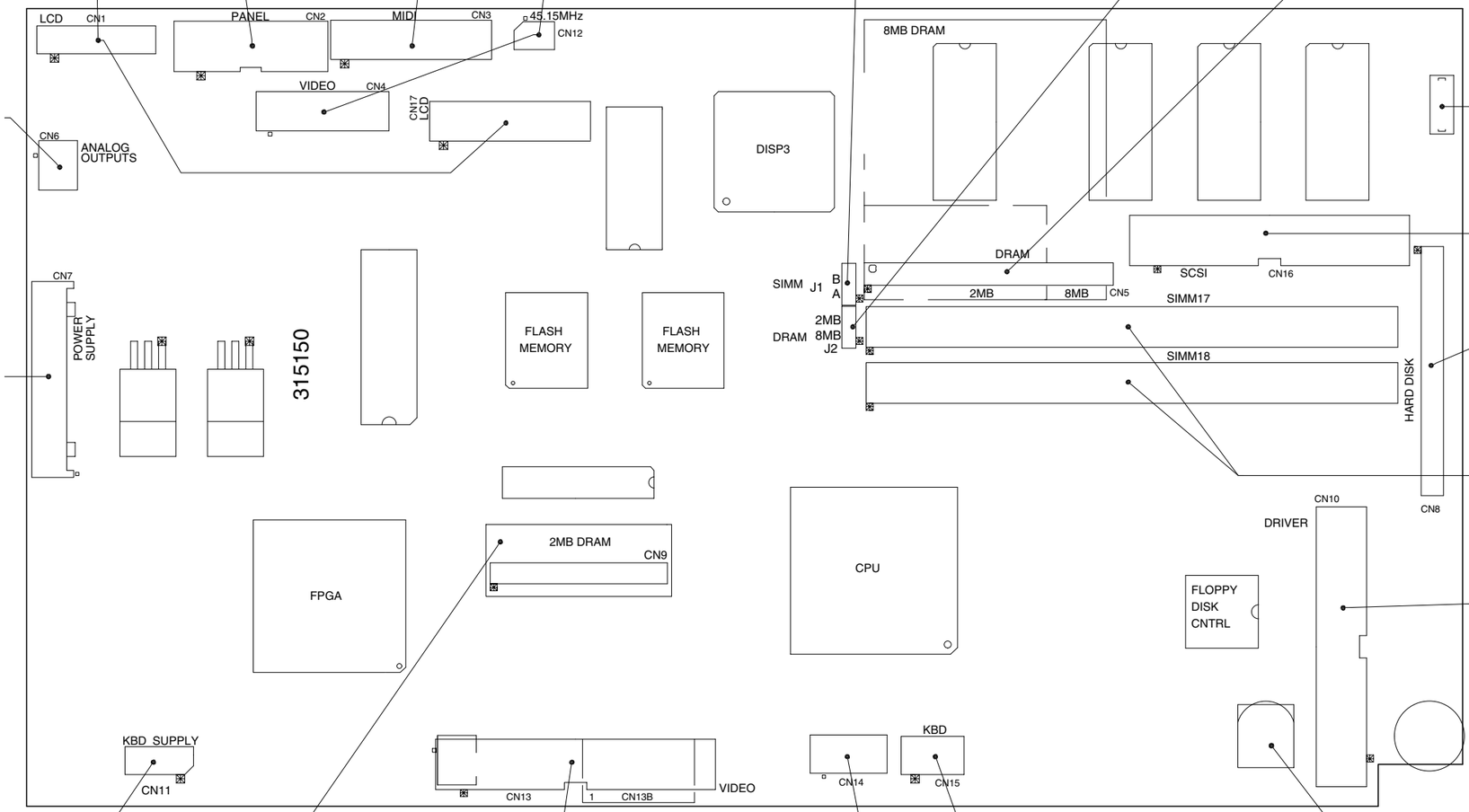
J1 - Set the jumper as follow:
1-2 "A" if Buffer modules are installed
2-3 "B" if SIMM DRAM modules are installed
note: the buffer modules are supplied with A/V & Vocal processor kit, if neither buffer or Simm modules are installed, J1 position is ininfluent.

J2 - Set this jumper as follow:
1-2 for 8MB SAMPLE DRAM expansion
2-3 for 2MB SAMPLE DRAM expansion
if no DRAM expansion is installed the jumper position must be 1-2.

CN1 or CN17 to Lcd Display
(depend by organ model)

CN4 & CN12 to A/V
& Vocal Processor Board

CN5 - SAMPLE DRAM Expansion
Two sizes are available:
970213 - 2Mbyte (32pins)
970331 - 8Mbyte (44pins)



Ground Connection

CN16 - SCSI Expansion

CN8 - HARD DISK Expansion
970207 - Optional mounting kit
for Hard disk unit

SIMM DRAM Expansion Slots,
These modules must be two as:
1M x8 or x9 70nS 30-pins
4M x8 or x9 70nS 30-pins
only 4Mx2 are available from
Generalmusic as code 970225

CN10 - to 3.5" Disk Drive

CN7 - from Power
Supply Board

CN11 - to Keyboard
Interface Board

CN9 - 2Mbyte DRAM expansion
supplied with Hard Disk mounting kit

CN13 (and also CN18) - these connectors
are connected to A/V and Vocal Processor Board
the configuration of these depend by organ model

VR1 - After Touch Adjustment

CN15 - from Keyboard Interface Board

CN14 - Used only for development

DRW G.Boccato	DWG# 550147	PCB#	GENERALMUSIC S.p.A. ITALY
CKD N.Riccobelli	DISK: 64 PRT: 1/1	Cpu & Sound Generator Board General User Map	ALL RIGHTS ARE RESERVED. NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC.
APP. Orsetti	REV: 07/04/98		

761143 - AUDIO/VIDEO WITH VOCAL PROCESSOR BOARD (PAL VERSION)
761152 - AUDIO/VIDEO WITH VOCAL PROCESSOR BOARD (NTSC VERSION)

ADDR.& DATA BUS
FROM/TO CN1& SOUND GENERATOR BOARD CN13

ADDR & CONTROL SIGNALS
FROM/TO CPU & SOUND GENERATOR BOARD CN4

CPU DATA BUS

CPU ADDRESS BUS

CN3

CN1

SDMA-IN
SDMA-CK
SDMA-C0
SDMA-C1

IC18-A GATEVIDEO

105005 - FPGA (VIDEO MODE)

IC16-A HM514260
256K X16 DINAMIC RAM

IC21-A ADV476KP35
RAM DAC

RED
GREEN
BLUE
CSYNC
SUBCRR
HYSYNC
VSYNC
PAL/NTSC

CHROMA SUBCARRIER PLL
PAL 8.867238MHz
NTSC 7.15909MHz
COMP DUTY CICLE ADJ
IC15-A TL071

IC19-A TD8501
PAL/NTSC ENCODER
DELAY LINE
TOKO1436

IC20-A 74HC04
IC20-B 74HC04
IC20-C 74HC04
IC20-D 74HC04
IC20-E 74HC04
IC20-F 74HC04

NTSC ONLY
PAL ONLY

CN4
HSYNC
GREEN
BLUE
CVBS
LUM
RED
CHR
VSYNC
LGND

TO POWER AMP & SUPPLY BOARD CN1 (WK)
TO AN&VID OUT BOARD CN1 (GND)
TO CONTROLS & MIDI BOARD CN1 (PS-GPS)
VIDEO OUT

IC17-A ADSP2181

IC1-A 74AC138
1 OF 8 DECODER

IC4 MAX709

IC18-B GATEVIDEO

IC1-B 74AC138
IC3-E 74HC125D
IC11-E 74HC125D
IC10-E 74HC32
IC9-E 74HC00
IC2-C 74HC74
IC16-B HM514260
IC21-B ADV476KP35
IC19-B TD8501

IC14 7812
IC7 7805
IC13 7912
IC15-B TL071
IC6-B AD1877
IC20-G 74HC04
IC8-C 74HC74
IC12-B 27C4001D
IC17-B ADSP2181

IC10-A 74HC32
IC10-B 74HC32
IC10-C 74HC32
IC10-D 74HC32
IC9-B 74HC00
IC9-C 74HC00
IC9-D 74HC00
IC9-A 74HC00
IC3-B 74HC125D
IC3-C 74HC125D
IC3-D 74HC125D
IC3-A 74HC125D
IC11-A 74HC125D
IC11-B 74HC125D
IC11-C 74HC125D
IC11-D 74HC125D
IC2-A 74HC74
IC8-A 74HC74
IC8-B 74HC74

IC12-A 27C4001D
UNMOUNTED - FUTURE EXPANSION

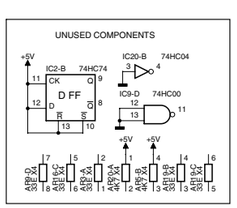
IC6-A AD1877
SIGMA DELTA A.D CONVERTER

IC15-A TL071

CN2
A/V INPUT & SUPPLY
FROM POWER AMP & SUPPLY BOARD
CN5 (PS-GPS) CH1 (GPS-PS)

CN5
CLOCK
FROM CPU & S.G. BOARD CN12

UNUSED COMPONENTS



Adjustment Table

N.	Adjustment Type	Test Point	Operation Point	Note:
1	COMPOSITE DUTY CYCLE ADJ	R32 side IC18	C81	Set the oscilloscope on DC at 1V/div. 50uS/div., turn the trimmer to have duty cycle more close as possible to 50%, verify the adjustment with a monitor attached to VIDEO OUT socket.

PCB# 315109

DRW RICCOBELLI	DWG# 550137	PCB# 315109	GENERALMUSIC S.p.A. ITALY
CKD RICCOBELLI	DSK# 6 PART: 1/1	SCHEMATIC DIAGRAM A/V WITH VOCAL PROCESSOR BOARD	ALL RIGHTS ARE RESERVED, NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC.
APP. PANNELLI	REV: 19-01-00		

A/V & VOCAL PROCESSOR BOARD (PCB# 315109)

DRW: BOCCATO	DWG: 315109	SCHEMATIC DIAGRAM PS2600 GPS2600-3600	GENERALMUSIC S.p.A. Italy
CKD: BATTELLI	DISK: 6 PART: 1/1	A/V & Vocal Processor Board	ALL RIGHTS ARE RESERVED, NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY GENERALMUSIC.
APP: PANNELLI	REV: 08-03-00		

Test Procedure and Adjustment

The procedures that follow must be executed subsequently in the order specified.
These procedures are not intended to repair a fault but only to check the correct instrument operations after a repairing execution.

Test Instruments

☑ Dual trace oscilloscope
☑ Digital Multimeter
☑ Signal Generator

Accessories

☑ 2 x 4Mbyte SIMM DRAM modules.
☑ 1 3.5inch Diskette.
☑ 1 SCSI Kit.
☑ Read/write SCSI device (ZIP, JAZ, Hard disk etc...).
☑ RS232 loopback (terminal 1-2 and 3-5 shorted).
☑ MIDI Cable.
To check completely the keyboard are necessaries all the optional accessories installed.

Setup

Install the optional accessories: the 2 SIMM Volatile DRAM modules and the SCSI kits, insert the diskette into 3.5" disk drive (Not a Operating System Disk).
Set the jumper J1 on CPU board at position B.
Set the JP1 and JP2 jumpers on Supply or Mixer board at position A.
Connect the external SCSI device to the SCSI socket.
Plug the RS232 loopback into the socket.

Checks and Adjustments

☑ Display Contrast adjustment

To adjust the display contrast turn VR2 on POWER AMPLIFIER AND SUPPLY BOARD with the CONTRAST potentiometer (located on controls panel) at half stroke. Verify the excursion of the CONTRAST potentiometer checking the display readability from all position.

☑ Aftertouch adjustment

To adjust the keyboard aftertouch locate the VR1 trimmer on CPU board, connect the scope CH1 probe tip to its center terminal, probe clip connected at ground, adjust VR1 to obtain an excursion from 0 to 5V every time a note key is pressed with different pressure, or to obtain a better adjustment follow the instructions on ADJUSTMENT TABLE (page 11).

☑ RS232 check

Press EDIT and using the DIAL and ENTER/ESCAPE controls select 1-GENERAL, select 3-COMPUTER, press F8 button to select MODE and set PC1 with cursor keys, press ENTER to confirm.
Press ESCAPE 2 times, select 2-MIDI, select COMMON/ARRG.(F5) and set "Common Ch." to 1 using the DIAL, press (F7) to set LOCAL OFF, verify that the keyboard plays thru RS232 by unplugging and re-inserting the RS232 loopback into the socket.

☑ RS422 check

Press ESCAPE, select 1-GENERAL, select 3-COMPUTER, select MODE(F8), set MACINTOSH, press ENTER to confirm, check the 1MHz 5Vpp clock appear on pin 1 of COMPUTER socket (use the second probe tip to do that).

☑ MIDI check

Re-select MODE(F8) and re-set it to OFF, press ENTER to confirm and ESCAPE 2 times, select 2-MIDI and then press F7 2 times (LOCAL ON and OFF: this operation maybe necessary to re-set the normal MIDI communication); connect the MIDI cable between MIDI A IN and MIDI A OUT sockets, verify that the keyboard plays thru MIDI I/O by unplugging and re-inserting the MIDI loopback cable into the socket.

☑ DATE and TIME set

Go to page 4 and press SET DATE(F1) button, set the day, month and year using the DIAL or numeric keypad, press ENTER; also set the time pressing SET TIME(F2), finally return to the first page of GENERAL settings.

☑ Panel Key and Led check

Press EDIT, select 1-GENERAL, press F1 (SYSTEM INFO) and F8 the display shows a warning message: press ENTER to continue, select PANEL TEST(a) and then press all the panel buttons checking their operation on display, at the same time every led of pressed button must light up (note: DISK led and EFFECT OFF are not tested).

☑ Pitch Bender check

Rotate the Pitch Bender verifying the excursion displayed, it ranges from 0 to 127 with 64 on center position.
A slightly difference may be adjusted by VR1 on CONTROLS PANEL INTERFACE BOARD, major differences may be adjusted repositioning the knob (see page 4).

☑ Pedals check

Pressing SOFT (Pedal 1) and SOSTENUTO (Pedal 2) the display shows 0 or 127, pressing DAMPER (Pedal) the display shows a value that ranges from 0 to 127 continuosly.
Press ENTER and ESCAPE simultaneously to return at HARDWARE test menu.

☑ Memories and Optional Accessories

Press ALL PART (F1), the instrument self-test check subsequently the following devices: SIMM modules (F2 Volatile DRAM), 8Mbyte sample dram (F3 Backed DRAM), Internal Hard Disk (F4 HardDisk), 3.5" disk drive (F5 Floppy Disk), Video interface (F6 Video) and SCSI interface (F7 SCSI Test) and marking with "Pass" all devices checked successfully, with "Not Present" all devices not attached, with "Fault" all device defective. Theoretically all test must be passed, if you have a mistake on a device re-check its installation.
Pressing G the third Rom Sound (IC10) is checked.
Press ENTER, if necessary, to exit.

☑ Dsp check

Insert a stereo Jack plug into PHONES 1 socket.
Put MASTER fader at max, turn on the 1KHz test tone pressing HARDWARE SET(C) and measure with the oscilloscope a 4Vpp sinusoidal signal on tip and ring (L an R) of the Jack.
Turn off the signal by means HARDWARE SET(C).

☑ Vocal Processor check

Turn off the effects pressing EFFECT OFF.
Insert a 20mVpp 1KHz signal into MIC LINE 1 input socket, put INPUT MIC/LINE fader to maximum position and rotate full clockwise GAIN1 potentiometer located on the back panel.
With the oscilloscope always connected to PHONES 1 measure a signal approximately of 12-13Vpp.
Repeat this test for MIC LINE 2 input.

☑ Data Hold

Turn off the instrument, disconnect the signal cable, wait at least 30 seconds, turn on again and then press EDIT, select 1-GENERAL, press F1 (SYSTEM INFO), press (F8), press ENTER and F8 (DATA HOLD) and then wait until the display show PASS.
Note: this test checks the RAM connected to CN5 only.
Turn off the keyboard and then remove not included SCSI optional kit, replace the SIMM DRAM with the BUFFER modules and finally restore the J1 jumper position to A.

☑ Reliability & Final Check

Before reassembling the instrument and before deliver it to the user, it is a goal verify its reliability:
To do that switch it off, or leaving it switched on but operating with greatest caution, carefully shake the boards and connections inside it using an insulated tool (for example the handle of the screwdriver) to find wrong contacts and so on.
Turn on the instrument and re-check that it operate correctly, leaving it switched on for a long time and occasionnally launching the Demo sequence (press DEMO and ENTER) or verifing its functionality.

PS2600-GPS2600-GPS3600 FAQ

	Questions	Answers
1	How can I update the Operating System? Or How can I reload the Operating System?	The instrument is equipped with Flash Rom so that you can update it with the last operating system containing fixes, updates and new features. These updates can be downloaded directly from our web site at http://upgrade.generalmusic.com/cgi-bin/upgrade/upgrade.cgi. Afterwards copy the OS file downloaded in the diskette, using a pre-formatted disk from your instrument prevent possible errors, and follow the instructions below: 1- With the instrument turned off, insert the last Operating System disk then turn the instrument on. 2- The display shows "Loading OS-DISK clears ALL MEMORY!! <Enter to load / Escape to abort>". 3- Press ENTER then wait about 3 minutes for the OS loading. 4- The display shows "Loading successful!! <Enter to continue>", then press ENTER. 5- Turn off the instrument and remove the Operating System disk. 6- As you turn the instrument on, keep rotating the DIAL until the display shows "!!WARNING!! Dial on power-up requests Memory Clear!! <Enter to clear / Escape to abort> 7- Press ENTER, you have now completed the update process.
2	How can I do a complete **SYSTEM RESET**?	As you turn the instrument on, keep rotating the DIAL until the display shows "!!WARNING!! Dial on power-up requests Memory Clear!! <Enter to clear / Escape to abort> Then press ENTER.
3	What do the pedals make?	On this instrument the pedals are fully programmable by the customer, but if you play with a GRAND PIANO style the three pedals change with the following functions: **Vocal On/Off (left pedal):** This pedal switch on or off the vocal processor. **Sostenuto (centre pedal):** This pedal is a switch control pedal (on/off) which sustains the notes of the key currently depressed, all new notes played after having depressed the pedal are not affected, this pedal operates like a grand piano centre pedal. **Damper (right pedal):** This pedal applies the sustain effect to all notes released. If you release a note after depressing the damper, the note will proceed towards its natural decay according to the type of sound played. The Damper pedal is particularly effective with Piano type sounds, it is controlled by a "Damper Physical Model" patented by Generalmusic.
4	Why do the uppermost keys play always sustained?	For some piano sounds the notes from E6 to C8 are automatically sustained such as in an acoustic piano.
5	Why do all pedals work in reverse mode?	The instrument reads the status of the pedals at the power on and assume this status (normally open or normally closed depends by the type of pedal) as the default status in the rest position. The pedals must be inserted before you switch on the instrument.
6	Why does some pedal work in reverse mode?	For the same reason explained first you have not to press a pedal while the instrument is switched on and until it is ready to use.
7	I have replaced the DAMPER pedal potentiometer, how do I let position it correctly?	Set the potentiometer to have about 700 ohm between pin 5 and 1 of DIN plug with the pedal at the rest position. Note: the Damper potentiometer have a special resistive stroke, when you replace it use the manufacturer's part only (code 070556).
8	Why does not the instrument respond correctly? Or Why the initial screen shows a different model at the start-up? (after CPU Board replacing only)	The CPU board spare part supplied by Generalmusic have the wrong OS stored on its memory. Before re-loading the right operating system you must erase the old, to do this follow the instructions below: 1- Prepare an OS disk with the same OS contained on the CPU Board (the version is insignificant, if you have already one use it). 2- Begin the procedure of re-loading OS and after about half minute and before the end of loading: press the EJECT button and extract the OS disk, now the OS stored in memory is insubstantial and the CPU board is capable to load a new one. 3- Turn off the instrument and proceed to load the right OS as described above.
9	Why does the instrument not respond to any controls while the display shows the regular initial screen?	The communication inside the instrument between the CPU, Controls and Keyboard boards are in ring mode: if the ring is interrupted the instrument doesn't work, check each board and the connections between them.
10	Why do I hear some noise after I have connected the instrument to a MAC computer using the serial port?	The older Controls & Midi I/O board have the pin 8 of S11 socket shorted to GND, this cause a problem with some MAC computers, to solve the problem disconnect this pin (you can also operate this cut on the cable).
11	Why is the battery level (Edit / General / Battery & Rel.) always low? or Why does the display shows this warning message: "Warning!! Battery almost discharged, recharge the battery"?	After a long period of inactivity may be occur that the internal battery backup have not a sufficient time for re-charging during the normal activity, try to leave the instrument switched on for about 12-14 hours.
12	Why does the display shows this warning message: "Battery completely discharged instrument re-initialized"?	After a long period of inactivity may be occur that the internal battery is completely dis-charged, try to leave the instrument switched on for about 12-14 hours. Afterwards if the instrument will lost the data again, replace the battery.
13	Why does the instrument have an excessive noise on its outputs? (Vocal processor installed)	Check the MIC1 and 2 GAIN inputs setting, reduce the gain or mute these inputs in the appropriate screen. Many times the poor quality or the low signal of a microphone affect the S/N ratio.
14	Why does the instrument plays regurarly but the display is obscured with the backlight on?	Most probably the fault is in the contrast circuit of the LCD, in this instrument the contrast circuit is complex and pass through many boards, check it path entirely following the schematics.
15	In some live stages the instrument is noisy, Why?	The instrument is manufactured to satisfy all International Safety, EMC and RFI standards. To ensure these the instrument must be connected always to the Earth-Ground (via Mains Socket). An eventual bad connection to the ground, as could be happen in some situation, can get worse S/N ratio and RFI influence: check always to have a good connection to the ground on all stages the instrument plays.

Spare Part List

Legend

EU = Specify European Version (230Vac)
US = Specify United States Version (115Vac)
B = Gloss Black finish
M = Mahogany finish
W = Gloss White finish
Baldwin = Baldwin version
Gem = Gem version

Ref		Code	Description

Accessories

		970297	Pianist's Bench (B)
		970298	Pianist's Bench (W)
		970319	Pianist's Bench (M)
		955940	Demo Disk (Gem)
		955936	Demo Disk (Baldwin)
		955941	GPS2600 Operating System Disk (Gem)
		955937	GPS2600 Operating System Disk (Baldwin)
		955938	GPS3600 Operating System Disk (Baldwin)
		271290	Owner's Manual (English,Italian,German,French)(Gem)
		271291	Owner's Manual (All Languages) (Baldwin)
		300617	Owner's Manual Folder (Gem)
		300628	Owner's Manual Folder (Baldwin)
		271299	Italian HD Contents Manual
		271298	International HD Contents Manual
		130317	DIN/SCART Video Cable (Pal)(EU)
		130428	DIN/RCA Video Cable (Ntsc)(US)
		130274	Mains Cable (EU)
		130276	Mains Cable (US)

Optional Accessories

		130301	2mt Midi Cable
		970107	Volume Pedal
		970330	**SCSI Interface Kit**
		271238	* SCSI Installation Instructions
		171466	* WK SCSI Support
		171453	* SK-Equinox SCSI Support
		120521	* 3mm Grower Washer
		120255	* B2.9x6.5mm Screw
		120029	* M3x6mm Screw
		841186	* Ground Connection 22cm Length
		841185	* Ground Connection 7.5cm Length
		841183	* 34 Wires 25cm Length Flat Cable with Ferrite
		841152	* 34 Wires 5cm Length Flat Cable with Ferrite
37		**761177**	* **SCSI Interface Board (Pcb#315149)**
		560022	** 20V8AS-15HB1 Programmed GAL
		140940	** 50 Contacts Hor Female SCSI2 Connector
		140887	** 34 Contacts Hor Male Connector
		110086	** 25V 1,5A Fast Picofuse
		103034	** AM53CF94 SCSI-2 Controller
		103012	** 74HC125D SOIC Quad Tri-State Buffer
		103010	** 74HC04D SOIC Hex Inverter
		080173	** 1N5817 1A 20V Schottky Rectifer Diode
		010725	** 20MHz Ceramic Resonator With Capacitors
		970310	**Multimedia Kit for PC-Windows Systems**
		130429	* 3mt RS232 Cable (MiniDin 8 To D-Sub 9)
		970363	**Oriental Kit**
		955921	* Oriental "Styles and Demo" Disk
		955920	* Oriental "Sound 2" Disk
		955919	* Oriental "Sound 1" Disk
		271257	* Owner's Manual Oriental Kit
		970225	**Volatile SIMM Dram Modules (4MB x2)**
		271065	* Dram Installation Instructions
		100742	* Single 4MByte SIMM Module

Stand & Pedals Assembly

		970297	Pianist's Bench (B)
		970298	Pianist's Bench (W)
		970319	Pianist's Bench (M)
		800047	**Leg Assembly (B)**
		800048	**Leg Assembly (W)**
		800049	**Leg Assembly (M)**
		324654	* Brassed Caster
		260248	* Leg (B)
		260254	* Leg (W)
		262231	* Leg (M)
		120331	* WL4x30ts Black Screw
		720611	**Triple Pedal Assembly (B)**
		720612	**Triple Pedal Assembly (W)**
		720623	**Triple Pedal Assembly (M)**
		720637	**Triple Pedal Assembly (M)(2nd Version)**
		720613	* Triple Pedal Assembly (replace entirely)
		660684	* Pedals Bracket (M)
		660121	* Dual Pedals Stand (B)
		660122	* Dual Pedals Stand (W)
		320443	* 3x16ts Brass Screw
		262232	* Single Pedal Column (M)
		262316	* Single Pedal Column with Hole (M)(2nd Version)
		260249	* Pedals Top Cover (B)
		260255	* Pedals Top Cover (W)
		262230	* Pedals Top Cover (M)
		262317	* Pedals Top Cover (M)(2nd Version)
		210021	* 1x15mm Adhesive Red Felt (specify mt)
		171751	* Pedals Support (B)(W)
		171795	* Pedals Support (M)
		170858	* Pedals Brace
		170857	* Brass Pedal Plate
		120463	* 4.3x12.5x1 Black Washer
		120411	* WL3.5x20tt Black Screw
		120301	* B3.5x13tc Black Screw
		120150	* M10x40tce Black Screw
		120078	* M6x40tc Black Screw
		271043	Assembling Instructions (All Llanguages)
		190193	10mm ALLEN Hexagonal Key
		150618	Thumbscrew
		120523	M 6 Black Grower Washer
		120456	6.5x12.5x1.5 Black Washer
		120070	M6x20tc Black Screw

Cabinet Assembly

		660692	Woofer Protection Grid
26		660662	50x270mm Heatsink Grid
38		660664	Controls & Midi I/O Panel
		660453	SCSI Slot Closer
34		653465	Right Cheek Block for Keyboard (PS2600)
9		653457	Left Cheek Block for Keyboard (PS2600)
25		660405	Heatsink Grid
28		**561013**	**Hard Disk with "PS2600-International" Contents**
28		**561012**	**Hard Disk with "PS2600-Italian" Contents**
28		**561017**	**Hard Disk with "International-SE" Contents**
28		**561016**	**Hard Disk with "Italian-SE" Contents**
		340921	Speaker Washer
10		340916	Button for Power Switch (PS2600)
		340905	Suspension Rubber for HD
61		340522	Disk Drive Frame
		340503	Lower Potentiometer Knob for Mic/Line Input Gain
		340502	Upper Potentiometer Knob for Mic/Line Input Gain
		340115	Adhesive Flat Cable Fixing
		340075	PC-Board Spacer
		323070	9.5X3.8mm Bumpon Rubber
		320563	WL3x15ts Brassed Screw
		320452	Pivot For Cover Stand
		320447	WL4.5x45ts Screw
		320090	Hinge Between Rev. Cover And Cover
		320066	Hinge For Music Stand
		320065	Hinge Between Keyb. Front And Top Covers
6		229015	8ohm 1" Dome Tweeter Speaker
39		220120	8ohm 6" Full-range Speaker
41		220118	8ohm 8" Woofer Speaker
		219066	Adhesive Black Felt for Music Stand
		210261	10x30x1 Felt Washer
44		210074	Speaker Cloth (specify mt)
		210054	1x5mm Adhesive Spik (specify mt)
		210242	Filler for Speaker Box (Specify m²)
		210217	Black Sealer (specify mt)
		210054	1x5mm Adhesive Spik (specify mt)
		210016	1x10mm Adhesive Black Felt (specify mt)
		180781	75x17mm "Pianovelle" Adhesive
		180780	210x62mm "Baldwin Pianovelle" Adhesive
		180676	82x13.3mm "Baldwin" Logo Adhesive Plate
		180674	20x24mm "GM" Logo Adhesive Plate
		180779	210x62mm "Gem" Adhesive
		180675	40.5x12 "Gem" Adhesive Plate
		171790	Front Panel Angular Fixing (GPS3600)
29		171820	HD & Vocal Proc. Support
		171808	Disk Drive Support
33		171789	Support for Cheek Block
		171788	Left Arm for Keyboard Cover (GPS3600)
		171787	Right Arm for Keyboard Cover (GPS3600)
		171780	Tweeter Support
		171764	Cpu Board Support
		171756	Angular Fixing (GPS3600)
		171738	Mains Switch Support
		171672	Dual Hinge for Cover Sticks (GPS3600)
		171636	Angular Fixing for Rear Cover (GPS3600)
		171633	Angular Fixing for Music Stand Ass'y (GPS3600)
		171628	Angular Guide (GPS3600)
		171622	Left Support for Music Stand Ass'y (GPS3600)
		171621	Right Support for Music Stand Ass'y (GPS3600)
		171471	HD Support
		171299	Control Panel Angular Coupling
		171756	Angular Fixing for Controls Panel
		170868	5x8x10 Bush with Collar for Pivot
		170867	Washer for Cover Stand
		170866	Hinge For Cover Stand
		170864	Hinge Between Keyb. Cover And Front Panel
		170863	Hinge Between Cabinet And Cover
8		170859	Fixing Plate for Leg
		170389	Angular Fixing for Front Panel
		129072	WL4.5x45ts Screw
		129066	WL4.5x30ts Screw
		129043	WL4.2x16ts Brassed Screw
		129032	WL3.5x16ts Brassed Screw
		129024	WL4.5x60ts Screw
		129012	WL3x15ts Brassed Screw
		129007	WL4x25ts Brassed Screw
		129003	WL2.5x10ts Brassed Screw
		120968	Bush for Keyboard Cover
		120832	18.8mm Hexagonal Spacer
		120684	M4x10 Sleeve
		120681	MA6x13 Sleeve
		120581	M3 Nut
		120553	5x14x9 Black Washer for Cloth Panel Fixing
		120522	4mm Grower Washer
		120474	12.5x38x3 Washer
		120472	6.4x24x2 Black Washer
		120463	4.3x12.5x1 Black Washer
		120461	5.3X10X1 Black Washer
		120459	13.4x25x2.5 Black Washer
		120453	4.2x9x0.8 Black Washer
		120451	3.2x7x0.5 Black Washer
		120416	WL6x60ts Screw
		120412	WL4x35tt Burnished Screw
		120405	B3.5x9.5tc Black Screw
		120374	WL4x15tt Black Screw
		120341	WL4x20tt Black Screw
		120340	WL4x12tt Black Screw
		120336	WL4x25tt Black Screw
		120321	WL4x35ts Black Screw
		120310	WL3.5x10tt Black Screw
		120291	WL3x25ts Black Screw
		120287	WL3x30tc Black Screw
		120272	WL3x10tc Black Screw
		120146	M5x45tc Black Screw
		120143	M4x16tst Brass Screw
		120119	M4x16tc Black Screw
		120113	M3x4tc Black Screw
		120100	M12x55tc Screw
		120094	M3x30tsp Black Screw
		120084	M4x35tc Black Screw
		120078	M6x40tc Black Screw
		120064	M4x30tc Black Screw
		120063	M4x20tc Black Screw
		120028	M3x6tc Black Screw
1		110614	Mains Socket
35		110400	3.5" FDisk Drive
		110083	T2A Fuse 6.3x32mm (US)
		110021	T5A Fuse 6.3x32mm (US)
		110020	T5A Fuse 5x20mm (EU)
		110010	T2A Fuse 5x20mm (EU)
7		020493	100n 250Vac MKP EMI Capacitor "Siemens"
31		710582	Speakers Box (GPS2600)
		710585	Mid-Range Speaker Box (GPS3600)
		710584	Woofer Speaker Box (GPS3600)
		120681	* MA6x13 Sleeve
		120661	* M4 Black Collar

GPS2600 Wooden Parts

		262092	Front Panel (B)
		262206	Front Panel (W)
		262207	Front Panel (M)
		261941	Music Stand (B)
		262227	Music Stand (W)
		261944	Music Stand (M)
		262091	Revolving Keyboard Cover (B)
		262204	Revolving Keyboard Cover (W)
		262205	Revolving Keyboard Cover (M)
23		262088	Keyboard Cross-Bar (B)
23		262200	Keyboard Cross-Bar (W)
23		262201	Keyboard Cross-Bar (M)
		262086	Keyboard Cover Finishing (B)
		262198	Keyboard Cover Finishing (W)
		262199	Keyboard Cover Finishing (M)
		262085	Keyboard Cover (B)
		262196	Keyboard Cover (W)
		262197	Keyboard Cover (M)
43		262087	Cloth Panel Support
		262084	Cloth Panel
		260342	Front Cabinet Cover (B)
		260344	Front Cabinet Cover (W)
		262234	Front Cabinet Cover (M)
		260334	Rear Cabinet Cover (B)
		260346	Rear Cabinet Cover (W)
		262225	Rear Cabinet Cover (M)
		260341	Cabinet Cover Stick (B)
		260353	Cabinet Cover Stick (W)
		262226	Cabinet Cover Stick (M)

GPS3600 Wooden Parts

		262112	Front Panel (B)
		262218	Front Panel (W)
		262219	Front Panel (M)
		261753	Music Stand (B)
		262247	Music Stand (W)
		262058	Music Stand (M)
		261783	Stop Strip for Music Stand (B)
		262251	Stop Strip for Music Stand (W)
		262078	Stop Strip for Music Stand (M)
		261782	Left Shelf for Music Stand (B)
		262250	Left Shelf for Music Stand (W)
		262076	Left Shelf for Music Stand (M)
		261781	Right Shelf for Music Stand (B)
		262249	Right Shelf for Music Stand (W)
		262074	Right Shelf for Music Stand (M)
		261754	Centre Shelf for Music Stand (B)
		262248	Centre Shelf for Music Stand (W)
		262060	Centre Shelf for Music Stand (M)
		261758	Revolving Keyboard Cover (B)
		262257	Revolving Keyboard Cover (W)
		262064	Revolving Keyboard Cover (M)
		261761	Front Keyboard Cover (B)
		262314	Front Keyboard Cover (W)
		262315	Front Keyboard Cover (M)
		262109	Rear Keyboard Cover (B)
		262212	Rear Keyboard Cover (W)
		262213	Rear Keyboard Cover (M)
		262110	Rear Fillet for Keyboard Cover (B)
		262214	Rear Fillet for Keyboard Cover (W)
		262215	Rear Fillet for Keyboard Cover (M)
		262042	Keyboard Cover Guide
		262107	Left Keyboard Cheek Block (B)
		262208	Left Keyboard Cheek Block (W)
		262209	Left Keyboard Cheek Block (M)
		262108	Right Keyboard Cheek Block (B)
		262210	Right Keyboard Cheek Block (W)
		262211	Right Keyboard Cheek Block (M)
		261752	Keyboard Cross-Bar (B)
		262246	Keyboard Cross-Bar (W)
		262056	Keyboard Cross-Bar (M)
		261757	Pedals Capital (B)
		262255	Pedals Capital (W)
		262256	Pedals Capital (M)
		262129	Cloth Panel
		261750	Front Cabinet Cover (B)
		262244	Front Cabinet Cover (W)
		262052	Front Cabinet Cover (M)
		261751	Rear Cabinet Cover (B)
		262245	Rear Cabinet Cover (W)
		262054	Rear Cabinet Cover (M)
		261816	Cabinet Cover Short Stick (B)
		262258	Cabinet Cover Short Stick (W)
		262080	Cabinet Cover Short Stick (M)
		261755	Cabinet Cover Long Stick (B)
		262252	Cabinet Cover Long Stick (W)
		262062	Cabinet Cover Long Stick (M)
		262275	Cabinet Cover Closer Fillet (B)(M)
		262276	Cabinet Cover Closer Fillet (W)

Mains Filter Board

2		768198	Mains Filter Board (Pcb#310643)
		230565	* 2.5mH 250V 3A AC Line Filter
		140010	* 3 Contacts P=10 Vert Terminal Block
		020493	* 100n 250Vac MKP EMI Capacitor "Siemens"
		010545	* 4n7 250V Ceramic Capacitor (Iec-Ul-Csa)

Transformer Assembly

		730654	Transformer Assembly (115Vac) (US)
		730506	Transformer Assembly (230Vac) (EU)
3		**230120**	* **Transformer 115Vac 250W (US)**
3		**230128**	* **Transformer 230Vac 250W (EU)**
		190133	* Lateroid Insulator For Screw Block
		171303	* Transformer Support
4		140036	* Screw Block (specify contacts)
		120600	* M4 Self-Locking Nut
		120463	* 4.3x12.5x1 Black Washer
		120453	* 4.2x9x0.8 Black Washer
		120260	* B2.9x16tc Black Screw
		120034	* M4x12tc Black Screw

Power Amplifier & Supply Board

24		**761200**	**Power Amplifier & Supply Board (Pcb#315102)**
		340079	* TO220 Mica Washer
		340078	* TO220 Insulated Bush
		171187	* Heatsink (8xTO220)
		170717	* Heatsink for STK
		141102	* 6 Contacts Vert Male Connector
		141010	* 4 Contacts Vert Female Connector
		140873	* 4 Contacts Vert Male Connector
		140325	* 12 Contacts Vert Male Connector
		140324	* 9 Contacts Vert Male Connector
		140323	* 6 Contacts Vert Male Connector
		140010	* 3 Contacts P=10 Vert Terminal Block
		120857	* Vertical Male Faston 6.3mm
		120313	* B3.9x13tc Black Screw
		120301	* B3.5x13tc Black Screw
		120006	* M3x14tc Black Screw
		120003	* M3x8tc Black Screw
		110305	* Relay 12V / 2 Switch 1A 250Vac
		110304	* Relay 12V / 2 Switch 5A 250Vac
		110300	* 4.8V 280mAh Nicd Battery
		110119	* Fuse Clip 10A max (EU) (US)
		100907	* L4940V5 Low Drop +5V 1.3A Regulator
		100067	* LM337 1.2-37V 1.5A Adjustable Regulator
		100061	* TL072 Dual J-Fet Operational Amplifier
		100045	* 7812 +12V 1A Voltage Regulator
		100043	* 7912 -12V 1A Voltage Regulator
		100040	* STK4040X 70W Hybrid Amplifier
		090865	* BD244B TO220 Pnp Transistor
		090856	* J176 TO92 P-Channel J-Fet Transistor
		090194	* BC560 TO92 LN Pnp Transistor
		090183	* BC550 TO92 LN Npn Transistor
		090153	* BC327 TO92 Pnp Transistor
		090152	* BC337 TO92 Npn Transistor
		080606	* GBU8D 8A Rectifier Diodes Bridge
		080156	* 1N4002 1A 100V Rectifier Diode
		080103	* 1N4148 100mA 75V Signal Diode
		070121	* 1K 20% Horizontal Linear Trimmer
		060161	* 1E5 5W 10% Wire Resistor
		030882	* 10000uF 50V Snap-In Electrolytic Capacitor
		030880	* 10000uF 25V Snap-In Electrolytic Capacitor
		030858	* 4700uF 25V 20% Vert Electrolytic Capacitor

Crossover Board

5		**731029**	**Crossover Board (Pcb#310651)**
		230587	* 3.5mH 0.56mm Crossover Coil
		230533	* 0.45mH 1mm Crossover Coil
		141101	* 4 Contacts Vert Male Connector
		120581	* M3 Nut
		120013	* M3x25tc Black Screw
		030348	* 47u 100V 20% Axial Electrolytic Bipolar Capacitor
		030171	* 4u7 63V 20% Axial Electrolytic Bipolar Capacitor

Phones Assembly

		730507	Phones Assembly
14		**730523**	* **Phones Board (Pcb#310513)**
		230569	** FL5R200PNT EMI Coil For Signal
		140327	** 6 Contacts Hor Male Connector
		140217	** Jack Slim Horizontal S-F Socket
		140207	** Jack Horizontal F Socket (with dual switch)
13		652854	* Phones Board Support
		171327	* PC-Board Fixing
		120292	* WL3x10tc Black Screw

Keyboard Assembly

		720618	88N TP21 Keyboard with Interface Assembly
		720635	88N TP23 Keyboard with Interface Assembly
		841084	* 20 Wires 35cm Length Flat Cable
		841043	* 2 Wires 35cm Length Crimp Terminal Cable
		840761	* 20 Wires 12.5cm Length Flat Cable
80		**761142**	* **Keyboard Interface Board (Pcb#315024)**
		230569	** FL5R200PNT EMI Coil For Signal
		141018	** 20 Contacts Vert Female Connector
		141011	** 6 Contacts Vert Female Connector

	140918	**	2 Contacts Hor Male Connector
	140872	**	4 Contatcs Hor Male Connector
	100740	**	HD6433278 Cpu F=20MHz
	100605	**	74HC125 Quad 3-State Buffer
	090194	**	BC560 TO92 LN Pnp Transistor
	050493	**	10Kx4 1/8w 5% Resistor Array
	050492	**	10Kx8 1/8w 5% Resistor Array
	050414	**	2K2x4 1/8w 5% Resistor Array
	010725	**	20MHz Ceramic Resonator With Capacitors
	010662	**	220p 10% 50V X8 Cap Array
	010661	**	47p 10% 50V X8 Cap Array
81	**731033**	*	**After-Touch Connection Board (Pcb#315187)**
	140918	**	2 Contacts Hor Male Connector
	140890	**	4 Contacts Hor Male Single-Strip
78	**720617**	*	**88N TP21 Keyboard Assembly**
78	**720634**	*	**88N TP23 Keyboard Assembly**
77	**810552**	**	**39N Left Contacts Board (Pcb#310531)**
	340764	***	3 Dual Contacts Rubber Strip
	340211	***	12 Dual Contact Rubber Strip
	141018	***	20 Contacts Vert Female Connector
	141010	***	4 Contacts Vert Female Connector
	080103	***	1N4148 100mA 75V Signal Diode
79	**810551**	**	**49N Right Contacts Board (Pcb#310530)**
	340212	***	13 Dual Contact Rubber Strip
	340211	***	12 Dual Contact Rubber Strip
	141018	***	20 Contacts Vert Female Connector
	141010	***	4 Contacts Vert Female Connector
	080103	***	1N4148 100mA 75V Signal Diode
	160216	**	Key Return Spring (TP21P)
32	151236	**	Last C Key (TP21P)
12	151235	**	First A Key (TP21P)
22	151234	**	Sharp Key (TP21P)
21	151233	**	B Key (TP21P)
20	151232	**	A Key (TP21P)
19	151231	**	G Key (TP21P)
18	151230	**	F Key (TP21P)
17	151229	**	E Key (TP21P)
16	151228	**	D Key (TP21P)
15	151227	**	C Key (TP21P)
	160220	**	Key Return Spring (TP23)
32	151256	**	Last C Key (TP23)
12	151255	**	First A Key (TP23)
22	151254	**	Sharp Key (TP23)
21	151253	**	B Key (TP23)
20	151252	**	A Key (TP23)
19	151251	**	G Key (TP23)
18	151250	**	F Key (TP23)
17	151249	**	E Key (TP23)
16	151248	**	D Key (TP23)
15	151247	**	C Key (TP23)
	340092	*	5mm Board Spacer
	120288	*	WL3x20tc Blck Screw

Controls Panel Assembly

64	820608		Controls Panel Assembly (GPS2600)(B)(M)
64	820610		Controls Panel Assembly (GPS2600)(W)
	820609		Controls Panel Assembly (GPS3600)(B)(M)
	820611		Controls Panel Assembly (GPS3600)(W)
	841065	*	3 (of 4) Wires 7.5cm Length Crimp Terminal Cable
	841007	*	20 Wires 20cm Length Flat Cable
	840838	*	20 Wires 15cm Length Flat Cable
	840826	*	14 Wires 15cm Length Flat Cable
	840801	*	20 Wires 17.5cm Length Flat Cable
	840721	*	14 Wires 10cm Length Flat Cable
50	**810681**	*	**Left Control Panel Board (Pcb#315184)**
51	730508	**	Contrast Board (Pcb#315105)
	140874	***	Single In Line Vert Male Strip (specify contacts)
	070702	***	5K Linear Rotary Potentiometer
	340523	**	6.5mm Spacer
	141018	**	20 Contacts Vert Female Connector
	141015	**	14 Contacts Vert Female Connector
	140914	**	7 Contacts Hor Female Zif Mylar Connector
	140872	**	4 Contatcs Hor Male Connector
	140529	**	Microswitch 12V 50mA 0.25mm
	100607	**	74HC164 8bit S To P Shift Register
	080743	**	3mm Wide Diffused Green Led
	080711	**	3mm High Efficiency Red Led
60	**810299**	*	**Right Control Panel Board (Pcb#315100)**
	141018	**	20 Contacts Vert Female Connector
	141015	**	14 Contacts Vert Female Connector
	140914	**	7 Contacts Hor Female Zif Mylar Connector
	140529	**	Microswitch 12V 50mA 0.25mm
	100620	**	74HC86 Quad 2-Input Exor Gate
	100614	**	74HC74 Dual Flip-Flop
	100607	**	74HC164 8bit S To P Shift Register
	080711	**	3mm High Efficiency Red Led
56	**761196**	*	**Control Panel Interface Board (Pcb#315183)**
	141018	**	20 Contacts Vert Female Connector
	141015	**	14 Contacts Vert Female Connector
	140873	**	4 Contacts Vert Male Connector
	140854	**	16 Contacts Vert Male Connector Din41651
	140324	**	9 Contacts Vert Male Connector
	100740	**	HD6433278 Cpu F=20MHz
	100645	**	74HC4351 8ch Analog Multiplexer
	100605	**	74HC125 Quad 3-State Buffer
	090194	**	BC560 TO92 LN Pnp Transistor
	090183	**	BC550 TO92 LN Npn Transistor
	090153	**	BC327 TO92 Pnp Transistor
	080103	**	1N4148 100mA 75V Signal Diode
	070207	**	22K 20% Vertical Linear Trimmer
	010725	**	20MHz Ceramic Resonator With Capacitors
49	**730505**	*	**Sliders Board (Pcb#315104)**
	141015	**	14 Contacts Vert Female Connector
	070551	**	10K Linear 30mm Slider Potentiometer
53	**730246**	*	**DC-AC Converter Board (Pcb# Cs032001)**
	720621	*	**Pitch Assembly**
	770887	**	Pitch Cables Assembly
45	340568	**	Wheel
	340331	**	Sheath For Spring
	210264	**	Black Felt
46	171711	**	Wheel Reinforcement
47	171710	**	Wheel Support
	160166	**	Return Spring
	120554	**	Lock Washer
	120276	**	B2.9x6.5mm Screw
48	074700	**	10KB Rotative Pot with pin at 1/3 stroke
	660663	*	Controls Panel (GPS2600)(B)(M)
	660705	*	Controls Panel (GPS2600)(W)
	660665	*	Controls Panel (GPS3600)(B)(M)
	660706	*	Controls Panel (GPS3600)(W)
	651563	*	Cloth For Panel Slits
76	651561	*	Display Frame (B)(M)
76	653492	*	Display Frame (W)
70	651560	*	Display Plastic Glass
	340556	*	Polycarbonate Washer for Dial
	340523	*	6.5mm Spacer
58	340521	*	Dial Support
75	340516	*	<EDIT> Rubber Key Pad
74	340515	*	<SOUND GROUP> Rubber Key Pad
66	340514	*	<START STOP> Rubber Key Pad
65	340513	*	<STYLE-GROUP> Rubber Key Pad
62	340512	*	Slider Potentiometer Guide
63	340494	*	Slider Potentiometer Knob
73	340493	*	Dial Knob
71	340482	*	Display Right Rubber Key Pad
68	340481	*	Display Left Rubber Key Pad
	340466	*	Spacer H=8mm
67	340370	*	Contrast Knob
	340155	*	Spacer H=15mm
	230584	*	EMI Ferrite For Flat Cable
	210253	*	Potentiometers Anti-Dust Gasket
	210093	*	Adhesive Black Felt Strip
	210020	*	1.5x12mm Adhesive Red Felt (specify mt)
	171755	*	Controls Panel Support
52	171288	*	Display Support
57	171284	*	Boards Support
54	171224	*	DC-AC Converter Support
72	**140528**	*	**Right Contact Mylar Strip (display)**
69	**140527**	*	**Left Contact Mylar Strip (display)**
	120960	*	Dial Steel Sphere
	120581	*	M3 Nut
	120451	*	3.2x7x0.5 Black Washer
	120286	*	B2.9x4.5tc Black Screw
	120272	*	WL3x10tc Black Screw
	120028	*	M3x6tc Black Screw
59	**110254**	*	**Dial Encoder with Snap**
55	**080755**	*	**Lcd Display 320X240 dots SP14Q001 Hitachi**

Cpu & Sound Generator Board

30	**761195**		**Cpu & Sound Generator Board (Pcb#315150/1)**
	340934	*	Insulation Washer for Quartz
	340547	*	6.5mm Spacer
	231000	*	BLM21A102STP Smd EMI Coil For Signal
	230527	*	BL02RN2-R62 EMI Coil For Signal
	141018	*	20 Contacts Vert Female Connector
	141016	*	16 Contacts Vert Female Connector
	141011	*	6 Contacts Vert Female Connector
	141010	*	4 Contacts Vert Female Connector
	140922	*	32 Contacts Vert Male Strip P=2mm
	140917	*	2 Contacts Vert Male Connector
	140915	*	44 Contacts Vert Male Strip P=2mm
	140913	*	Simm Socket 30 Pin
	140881	*	14 Contacts Vert Female Con. For Mylar Cable
	140877	*	Jumper For Contacts Strip (p=2.54mm)
	140874	*	Single In Line Vert Male Strip (specify contacts)
	140873	*	4 Contacts Vert Male Connector
	140866	*	34 Contacts Vert Male Connector Din41651
	140854	*	16 Contacts Vert Male Connector Din41651
	140325	*	12 Contacts Vert Male Connector
	120857	*	Vertical Male Faston 6.3mm
	106003	*	MAX709 Power Monitor With Reset
	105009	*	DISP3 QFP Digital Sound Processor (Hitachi)
	105005	*	FPGA - Video/Lcd Controller
	105004	*	MC68360EM25 QFP Cpu
	104041	*	23C64000G SOP 64MBit Rom “Wave98”
	104037	*	23C32000G 32Mbit Rom “Styles”
	104036	*	MX23C6410 64Mbit Rom “Samples2”
	104035	*	MX23C6410 64Mbit Rom “Samples1”
	104020	*	KM62256CLG SOP 256Kbit SRam Ta=55nS
	104010	*	HM514280AJ 4M5bit Dram Ta=70nS
	104009	*	HM5118160ALJ 16Mbit Dram Ta=70nS
	104007	*	E28F016SV-70 1Mbit Flash Memory Ta=70nS
	103012	*	74HC125D SOIC Quad Tri-State Buffer
	103010	*	74HC04D SOIC Hex Inverter
	103004	*	AD1865R SOP 18bit D/A Converter
	103002	*	74HC245DW SOIC Octal Bus Transceiver
	103001	*	74HC08D SOIC Quad 2-Input And Gate
	101506	*	74AC04D SOIC Hex Inverter Gate
	101502	*	74AC125D SOIC Quad Tri-State Buffer
	100904	*	LM393 Dual Comparator
	100731	*	DS1202 Clock Calendar
	100591	*	GM82C765B Floppy Disk Controller
	100059	*	7805 +5V 1A Voltage Regulator
	100058	*	7905 -5V 1A Voltage Regulator
	091000	*	BC847 TO236 Smd Npn Transistor
	090153	*	BC327 TO92 Pnp Transistor
	090152	*	BC337 TO92 Npn Transistor
	081000	*	PMLL4148 Smd 100mA 75V Signal Diode
	080156	*	1N4002 1A 100V Rectifier Diode
	070160	*	2K2 20% Horizontal Linear Trimmer
	055103	*	470E X4 1/16w 5% Smd Resistor Array
	055102	*	33E X4 1/16w 5% Smd Resistor Array
	055101	*	4K7 X4 1/16w 5% Smd Resistor Array
	055100	*	100E X4 1/16w 5% Smd Resistor Array
	010732	*	4.194304MHz Quartz Oscillator
	010727	*	45.1584MHz Quartz Resonator
	010725	*	20MHz Ceramic Resonator With Capacitors
	010710	*	32768Hz Quartz Resonator
	010704	*	16MHz Quartz Resonator

Cpu Modules

	761168		**8Mbyte DRam Module (Pcb# 315152)**
	140945	*	44 Contacts Vert Female Strip P=2mm
	104040	*	KM416V4100BS-L6 Dram 64Mbit Ta=60ns
	103037	*	74FCT164245T 5V-3V 16bit Bidirectional Converter
	091001	*	BC857 TO236 Smd Pnp Transistor
	091000	*	BC847 TO236 Smd Npn Transistor
	090152	*	BC337 TO92 Npn Transistor
	081000	*	PMLL4148 Smd 100mA 75V Signal Diode
	031007	*	10u 16V 20% Smd Electrolytic Tantalium Capacitor
	761094		**2Mbyte DRam Module (Pcb# 315094)**
	140923	*	32 Contacts Vert Female Strip P=2mm
	104009	*	HM5118160ALJ 16Mbit Dram Ta=70nS
	761093		**Buffer Module Board (Pcb# 315023)**
	103013	*	74HC138D SOIC 1 Of 8 Decoder
	103003	*	74HC374DW SOIC Octal D-Type Flip-Flop
	081000	*	PMLL4148 Smd 100mA 75V Signal Diode

A/V & Vocal Processor Board

27	**761152**		**A/V Ntsc & Vocal Proc. Board (Pcb# 315109)(Baldwin)**
27	**761143**		**A/V Pal & Vocal Processor Board (Pcb# 315109)(Gem)**
	231000	*	BLM21A102STP Smd EMI Coil For Signal
	230582	*	LC Delay Line 400ns 0.5MHz
	230561	*	47uH 10% 100mA RF-Coil
	190231	*	5x2.5x0.8 Insulated Washer
	160122	*	Jump Length 2.5mm
	141016	*	16 Contacts Vert Female Connector
	141013	*	10 Contacts Vert Female Connector
	140917	*	2 Contacts Vert Male Connector
	140877	*	Jumper For Contacts Strip (p=2.54mm)
	140874	*	Single In Line Vert Male Strip (specify contacts)
	140866	*	34 Contacts Vert Male Connector Din41651
	140324	*	9 Contacts Vert Male Connector
	106003	*	MAX709 Power Monitor With Reset
	106000	*	TDA8501 PAL/NTSC Encoder
	105010	*	ADSP2181 Dsp Microcomputer
	105005	*	FPGA - Video/Lcd Controller
	104003	*	HM514260JP SOJ 4Mbit Dynamic Ram Ta=70ns
	103031	*	74HC00D SOIC Quad 2-In Nand Gate
	103030	*	74HC32D SOIC Quad 2-In Or Gate
	103012	*	74HC125D SOIC Quad Tri-State Buffer
	103011	*	AD1877 SOIC Dual Channel 1bit ADC
	103010	*	74HC04D SOIC Hex Inverter
	103007	*	74HC74D SOIC Dual Flip-Flop
	101500	*	74AC138D SOIC 1 Of 8 Decoder
	100739	*	ADV476 Color Palette Ram Dac
	100059	*	7805 +5V 1A Voltage Regulator
	100045	*	7812 +12V 1A Voltage Regulator
	100043	*	7912 -12V 1A Voltage Regulator
	100019	*	TL071 LN J-Fet Operational Amplifier
	091001	*	BC857 TO236 Smd Pnp Transistor
	091000	*	BC847 TO236 Smd Npn Transistor
	090153	*	BC327 TO92 Pnp Transistor
	090102	*	2N918 VHF Npn Transistor
	081000	*	PMLL4148 Smd 100mA 75V Signal Diode
	080500	*	BB204G Dual Varicap Diode
	055102	*	33E X4 1/16w 5% Smd Resistor Array
	055101	*	4K7 X4 1/16w 5% Smd Resistor Array
	030411	*	47u 25V 20% Low Prof Vert Electrolytic Capacitor
	030246	*	10u 25V 20% Low Prof Vert Electrolytic Capacitor
	010724	*	16MHz Ceramic Resonator With Capacitors
	010717	*	30.20979MHz Quartz Resonator (Ntsc)
	010714	*	30MHz Quartz Resonator (Pal)
	010715	*	8.867238MHz Quartz Resonator (Pal)
	010716	*	7.15909MHz Quartz Resonator (Ntsc)
	010602	*	5p2-30pF N750 Ceramic Capacitor Trimmer

Controls & MIDI I/O Board

36	**730651**		**Controls & MIDI I/O Board (Pcb#315103)**
	230569	*	FL5R200PNT EMI Coil For Signal
	141102	*	6 Contacts Vert Male Connector
	141018	*	20 Contacts Vert Female Connector
	141013	*	10 Contacts Vert Female Connector
	140324	*	9 Contacts Vert Male Connector
	140248	*	4 Poles Mini Din Female Socket
	140247	*	8 Poles Mini Din Female Socket
	140231	*	Jack Horizontal S-F Socket (dual switch)
	140219	*	13 Poles Din Horizontal Female Socket
	140217	*	Jack Slim Horizontal S-F Socket
	140216	*	6 Poles Din Horizontal Female Socket
	140212	*	5 Poles Din Horizontal Female Socket
	100919	*	MC33078 Dual LN Operational Amplifier
	100734	*	MAX202E RS232 Drivers/Receiver
	100618	*	74HC14 Hex Inverter Schmitt Trigger
	100035	*	6N138 Optocoupler
	090183	*	BC550 TO92 LN Npn Transistor
	080103	*	1N4148 100mA 75V Signal Diode
	071011	*	2x10K Alog Rotary Pot

Wiring Connections

	841239	*	10 Wires 55cm Length Flat Cable
	841238	*	9 Wires 35cm Length Flat Cable with Ferrite
	841152	*	34 Wires 5cm Length Flat Cable with Ferrite
	841071	*	20 Wires 30cm Length Flat Cable
	841030	*	16 Wires 5cm Length Flat Cable with Ferrite
	841025	*	1 Shielded Wire 10cm Crimp Terminal Cable
	840824	*	44 Wires 7.5cm Length Flat Cable
	840799	*	4 Wires 7.5cm Length Flat Cable
	840781	*	6 Wires 30cm Length Flat Cable
	840764	*	Ground Cable 10cm Length
	840708	*	3 (of 4) Wires 80cm Length Crimp Terminal Cable
	840689	*	12 Wires 10cm Length Crimp Terminal Cable
	840582	*	34 Wires 40 Cm Length Flat Cable
	840569	*	3 (of 4) Wires 17.5cm Length Crimp Terminal Cable
	840529	*	16 Wires 20cm Length Flat Cable
	840204	*	9 Wires 15cm Length Flat Cable
	840203	*	9 Wires 12.5cm Length Flat Cable
	840167	*	6 Wires 75cm Length Flat Cable
	770889		Speakers Cables Assembly (GPS2600)
	770894		Crossover Cables Assembly (GPS3600)
	770893		Woofer Cables Assembly (GPS3600)
	770892		Left Speaker Cables Assembly (GPS3600)
	770891		Right Speaker Cables Assembly (GPS3600)
	770888		Mains Cables Assembly (GPS2600)
	770895		Mains Cables Assembly (GPS3600)
11	**110320**	*	**Power Switch**

Note:

- All dimensions are in mm unless otherwise specified.
- The screw description is defined as follows:
  type of screw + diameter + X + length + type of head
  where type of screw is one of these:
  M = Metric thread
  B = Self-tapping screw for metal
  WL = Self-tapping screw for wood
  and type of head is one of these:
  tc = cylinder Phillips head
  ts = flared Phillips head
  tt = rounded Phillips head
  te = hexagonal nut head
  tsp = flat flared Phillips head
  tce = cylinder Allen hexagonal head
- The washer description is defined as follow:
  hole diameter + X + external diameter + X + thick
- Each spare part is single quantity unless otherwise specified.
- Asterisk prefix explanation:
  Omitted = First level spare part.
  One asterisk =Second level, part of previous listed first level part.
  Two asterisk = Third level, part of previous listed second level part.
  Three asterisk = ...
- Any request for not above mentioned part must encompass specific description including:
  1) Model name,
  2) Section name,
  3) Module code,
  4) Reference name,
  5) Quantity number.